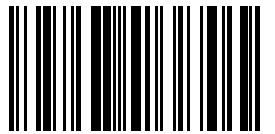




WEIGHT MANAGEMENT



WARNING

The values of the results of genetic tests are not diagnostic, but show trends that are influenced by physiological, pathological conditions, use of medications and other personal conditions of the examinee.

Only your clinician is able to correctly interpret these results and to prescribe the most appropriate treatment for you, and the company is not responsible for any treatment based on the results.

If necessary, our science team is available to discuss the results with the attending clinician upon request.

The genetic test

The genetic examination is the most current and advanced technological leap in the health area, mainly for the clinical area because DNA is the true Instruction Manual for the individual.

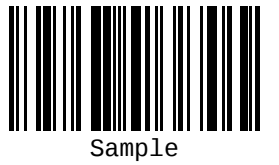
The exam shows conditions, determined by genetics, that may or may not develop at some point in life, as in DNA, all individual needs, susceptibilities and psycho-behavioral and structural characteristics are determined with high precision, functional and reactive that an individual has and will have throughout his life.

Today science considers Epigenetics, a term that encompasses countless factors such as the state and emotional relationships, nutrition, physical activity and environmental factors, among others, as of fundamental value for development (expression), or not (silencing), of these conditions.

Hence the importance of genetic examination. It allows each person to know what their tendencies are and thus be able to work epigenetically to prevent them from developing (genetic silencing), thus maintaining their Health, Vitality, Beauty and Longevity.

The information found in the DNA, which determines the individual differences and the conditions analyzed in the exams, are called Polymorphisms (SNPs). In each condition our exam can find and analyze up to several dozen polymorphisms.

The current level of our technology, allows the high level of precision and reliability of our exams in the fundamental aspects for a genetic exam.



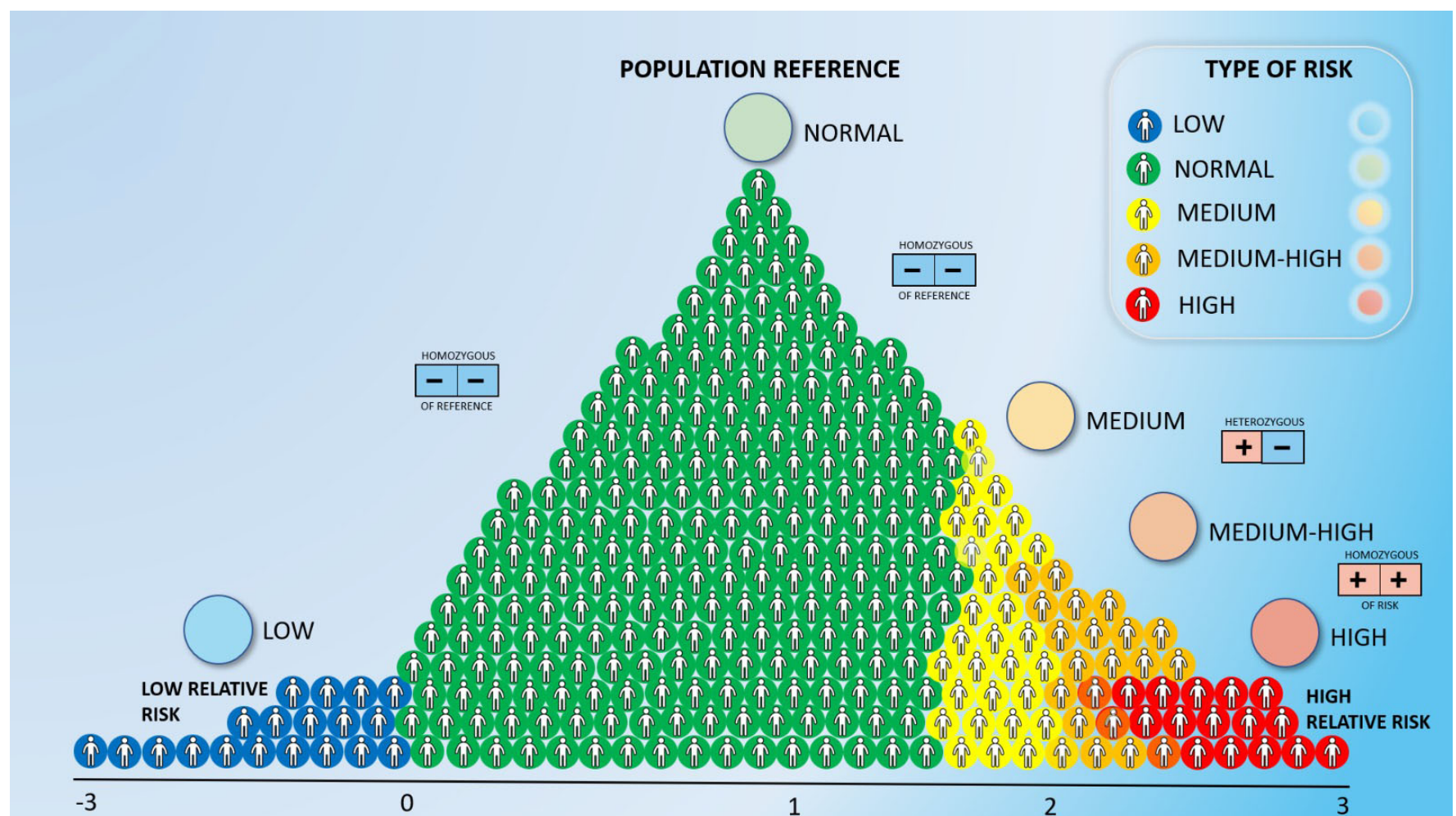
How to interpret the exam:

FIRST PART

The analyzed genetic CONDITIONS are grouped into CATEGORIES.

Each CONDITION is presented according to its MAGNITUDE. That is, what is the genetic susceptibility (intensity or possibility) of the analyzed condition to express itself (happen).

-  If the susceptibility is TOO HIGH, a RED dot will appear
-  If the susceptibility is HIGH, an ORANGE dot will appear
-  If the susceptibility is AVERAGE, a YELLOW dot will appear
-  If the susceptibility is NORMAL a GREEN dot will appear
-  If the susceptibility is LOW, a BLUE dot will appear
-  If the condition is not identified GRAY dot



PART TWO

In the second part the CATEGORIES and CONDITIONS are shown again in more detail and presenting the analyzed genes

Name

Sample

Age

Gender

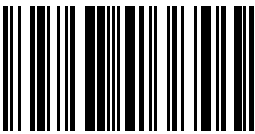
F

Report date

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Prescriber

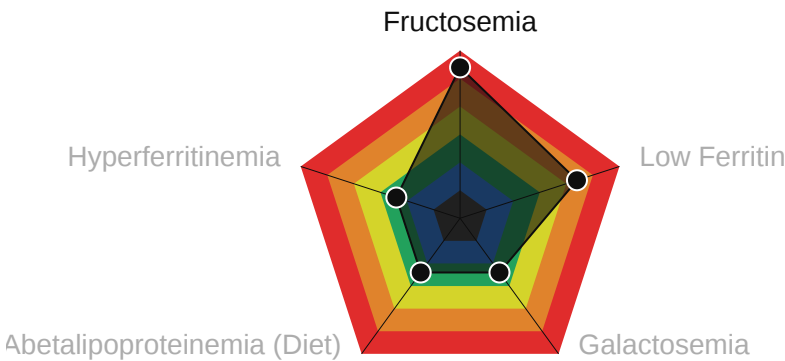
Health insurance



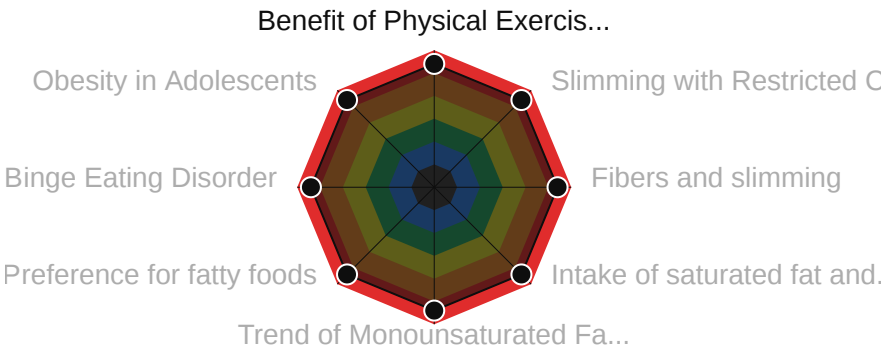
Sample

MOST RELEVANT CONDITIONS BY CATEGORY

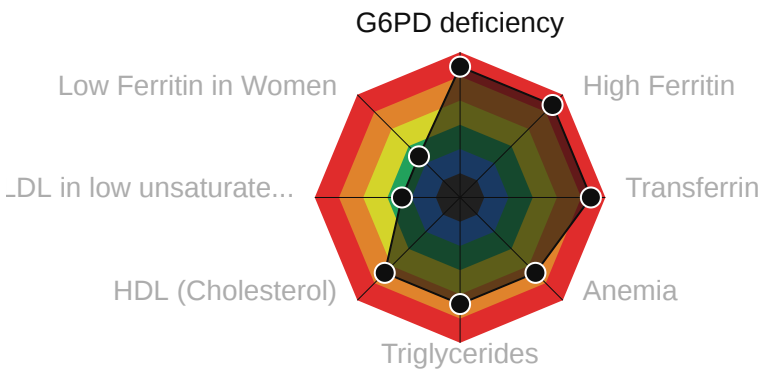
METABOLIC DISORDERS



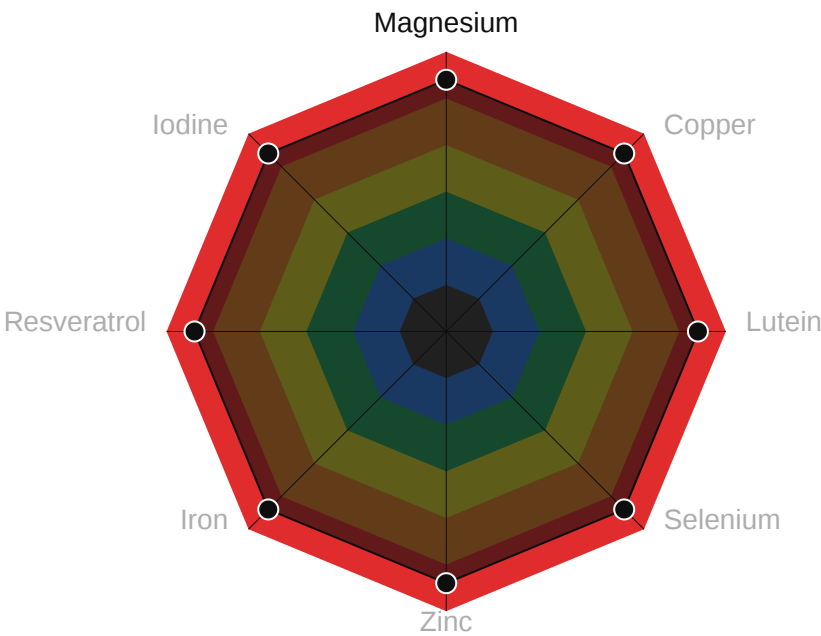
WEIGHT



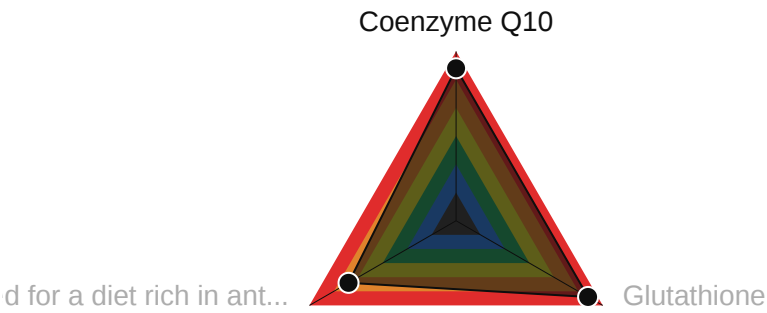
HEMATOLOGIC SYSTEM



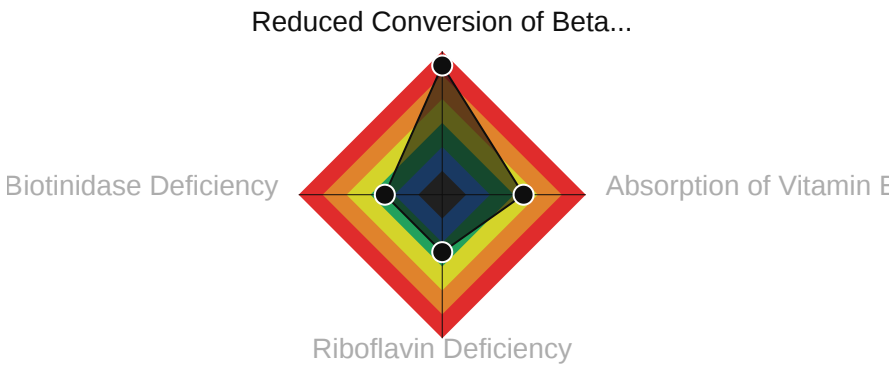
NEED FOR NUTRIENTS



ANTIOXIDANTS / SUPPLEMENTS



VITAMINS NEED



Name

Sample

Age

Gender

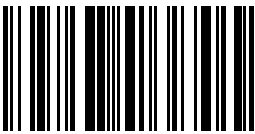
F

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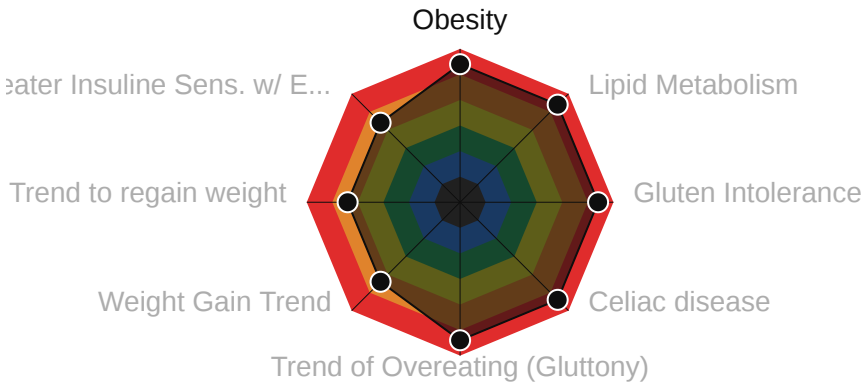
Health insurance



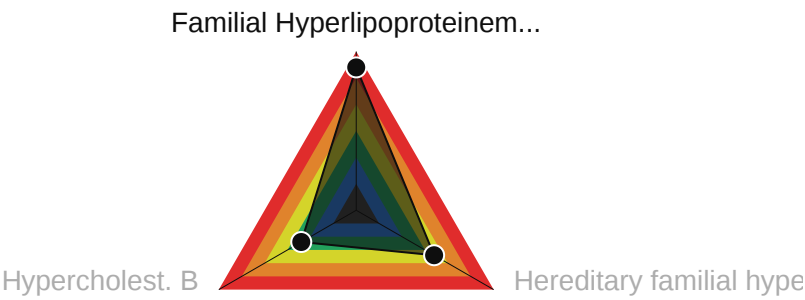
Sample

MOST RELEVANT CONDITIONS BY CATEGORY

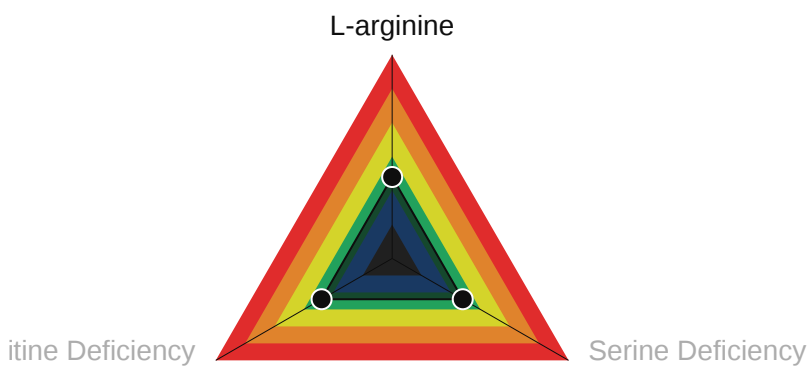
METABOLIC



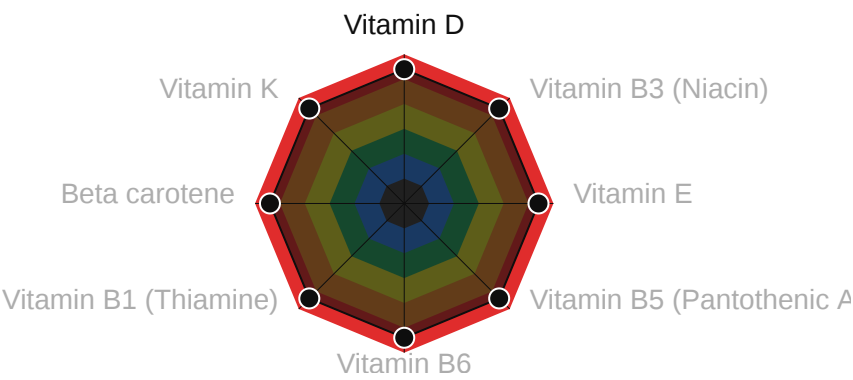
CARDIOVASCULAR



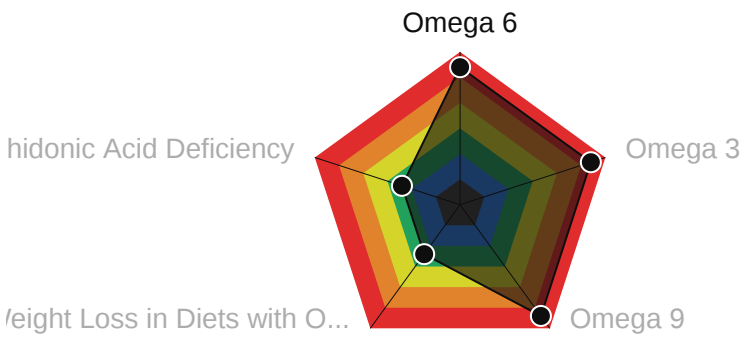
AMINO ACIDS



VITAMINS



FATTY ACIDS



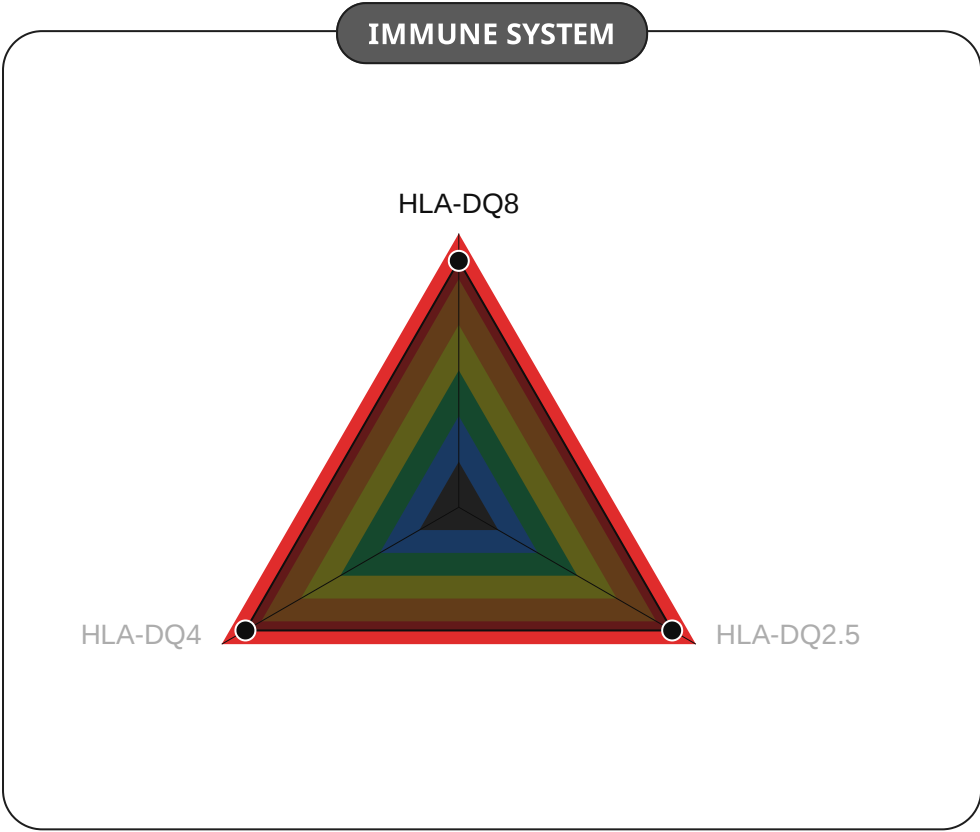
DIABETES



Name	Sample		
Age		Gender	F
Report date		12/09/2025	
Prescriber	Health insurance		



MOST RELEVANT CONDITIONS BY CATEGORY



Name

Sample

Age

Gender

F

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SUMMARY OF RESULTS

Allergies

Gluten Sensitivity	3	-	-	3	+	-	1	+	+	HIGH
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Amino acids

L-arginine	11	-	-	0	+	-	0	+	+	NORMAL
Serine Deficiency	5	-	-	1	+	-	0	+	+	NORMAL
L-carnitine Deficiency	1	-	-	0	+	-	0	+	+	NORMAL

Antioxidants / Supplements

Coenzyme Q10	150	-	-	13	+	-	11	+	+	HIGH
Glutathione	386	-	-	44	+	-	14	+	+	HIGH
Need for a diet rich in antioxidants	19	-	-	4	+	-	1	+	+	MEDIUM-HIGH

Cardiovascular

Familial Hyperlipoproteinemia Type III	3	-	-	0	+	-	1	+	+	HIGH
Hereditary familial hypercholesterolemia	15	-	-	1	+	-	1	+	+	MEDIUM
Hypercholesterolemia (Type B)	7	-	-	0	+	-	0	+	+	NORMAL

Cardiovascular and Cerebrovascular

Hypertension	28	-	-	8	+	-	2	+	+	MEDIUM-HIGH
Sensitivity to Salt (Hypertension)	6	-	-	4	+	-	0	+	+	MEDIUM

Diabetes

Type 2 diabetes	58	-	-	8	+	-	3	+	+	HIGH
Obesity in Type 2 Diabetes Patients	0	-	-	1	+	-	0	+	+	MEDIUM-HIGH
Fasting Glucose Level Increase	4	-	-	1	+	-	1	+	+	MEDIUM

Endocrine system

Benefit of adopting a low glycemic index diet	0	-	-	0	+	-	1	+	+	HIGH
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Gender

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Essential Amino Acids

L-tryptophan	58	-	-	7	+	-	10	+	+	MEDIUM-HIGH
L-lysine	31	-	-	0	+	-	0	+	+	LOW

Fatty acids

Omega 6	312	-	-	33	+	-	24	+	+	HIGH
Omega 3	107	-	-	23	+	-	9	+	+	HIGH
Omega 9	144	-	-	24	+	-	12	+	+	HIGH
Weight Loss in Diets with Olive Oil	0	-	-	1	+	-	0	+	+	NORMAL
Arachidonic Acid Deficiency	2	-	-	0	+	-	0	+	+	NORMAL

General

Alcohol Intolerance	1	-	-	0	+	-	0	+	+	NORMAL
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Genetic diseases

Glutathione Synthetase Deficiency	4	-	-	0	+	-	0	+	+	NORMAL
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Hematologic system

G6PD deficiency	51	-	-	0	+	-	2	+	+	HIGH
High Ferritin	10	-	-	1	+	-	3	+	+	HIGH
Transferrin	2	-	-	1	+	-	1	+	+	HIGH
Anemia	25	-	-	1	+	-	2	+	+	MEDIUM-HIGH
Triglycerides	26	-	-	12	+	-	2	+	+	MEDIUM-HIGH
HDL (Cholesterol)	28	-	-	9	+	-	3	+	+	MEDIUM-HIGH
Lower LDL in low unsaturated fat diets	1	-	-	0	+	-	0	+	+	NORMAL
Low Ferritin in Women	2	-	-	0	+	-	0	+	+	NORMAL

Hormone

Reduction of Thyroid Hormonal Metabolism	2	-	-	1	+	-	0	+	+	MEDIUM
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Name

Sample

Age

Gender

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Hormones

Cortisol Level	8	-	-	2	+	-	1	+	+	MEDIUM
Aromatase Deficiency	12	-	-	2	+	-	0	+	+	MEDIUM

Immune system

HLA-DQ8	0	-	-	0	+	-	1	+	+	HIGH
HLA-DQ2.5	2	-	-	0	+	-	1	+	+	HIGH
HLA-DQ4	2	-	-	0	+	-	1	+	+	HIGH

Metabolic

Obesity	239	-	-	21	+	-	3	+	+	HIGH
Lipid Metabolism	191	-	-	12	+	-	0	+	+	HIGH
Gluten Intolerance	3	-	-	2	+	-	1	+	+	HIGH
Celiac disease	16	-	-	3	+	-	2	+	+	HIGH
Trend of Overeating (Gluttony)	193	-	-	10	+	-	1	+	+	HIGH
Weight Gain Trend	198	-	-	13	+	-	0	+	+	MEDIUM-HIGH
Trend to regain weight	9	-	-	0	+	-	2	+	+	MEDIUM-HIGH
Greater Insulin Sensitivity with Physical Exercise	0	-	-	0	+	-	1	+	+	MEDIUM-HIGH
Caffeine Metabolization	6	-	-	2	+	-	0	+	+	MEDIUM
Carbohydrate Metabolism	6	-	-	1	+	-	0	+	+	MEDIUM
Trend of Eating Sweets	13	-	-	5	+	-	0	+	+	MEDIUM
Micronutrient Metabolism	5	-	-	3	+	-	0	+	+	MEDIUM
Leptin receptor polymorphism	2	-	-	0	+	-	0	+	+	NORMAL
Serum Ascorbate Levels	4	-	-	1	+	-	0	+	+	NORMAL
Protein Metabolization	1	-	-	0	+	-	0	+	+	LOW

Metabolic disorders

Fructosemia	4	-	-	0	+	-	1	+	+	HIGH
Low Ferritin	1	-	-	2	+	-	1	+	+	MEDIUM-HIGH
Galactosemia	93	-	-	0	+	-	0	+	+	NORMAL

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Abetalipoproteinemia (Diet)	8	-	-	0	+	-	0	+	+		NORMAL
Hyperferritinemia	10	-	-	0	+	-	0	+	+		NORMAL

Need for Nutrients

Magnesium	327	-	-	30	+	-	26	+	+		HIGH
Copper	103	-	-	13	+	-	11	+	+		HIGH
Lutein	152	-	-	21	+	-	12	+	+		HIGH
Selenium	405	-	-	38	+	-	15	+	+		HIGH
Zinc	205	-	-	25	+	-	14	+	+		HIGH
Iron	9	-	-	2	+	-	4	+	+		HIGH
Resveratrol	73	-	-	13	+	-	3	+	+		HIGH
Iodine	124	-	-	20	+	-	3	+	+		HIGH
Uridine Monophosphate	32	-	-	3	+	-	2	+	+		MEDIUM-HIGH
Chromium Picolinate	23	-	-	7	+	-	1	+	+		MEDIUM-HIGH
Choline	13	-	-	3	+	-	1	+	+		MEDIUM-HIGH
Turmeric (Curcumin)	1	-	-	1	+	-	0	+	+		MEDIUM
Zeaxanthin	56	-	-	10	+	-	1	+	+		MEDIUM
Lycopene	4	-	-	1	+	-	0	+	+		MEDIUM
Apigenin	102	-	-	13	+	-	4	+	+		MEDIUM
Calcium	23	-	-	8	+	-	0	+	+		MEDIUM
Molybdenum	11	-	-	0	+	-	0	+	+		NORMAL
Phosphorus	6	-	-	0	+	-	0	+	+		NORMAL

Personal characteristics

Greater Stimulus with Caffeine	7	-	-	1	+	-	0	+	+		NORMAL
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Vitamins

Vitamin D	419	-	-	42	+	-	22	+	+		HIGH
Vitamin B3 (Niacin)	3	-	-	0	+	-	4	+	+		HIGH
Vitamin E	323	-	-	32	+	-	16	+	+		HIGH
Vitamin B5 (Pantothenic Acid)	75	-	-	19	+	-	6	+	+		HIGH
Vitamin B6	114	-	-	18	+	-	11	+	+		HIGH

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Vitamin B1 (Thiamine)	11	-	-	0	+	-	1	+	+	HIGH
Beta carotene	1	-	-	0	+	-	1	+	+	HIGH
Vitamin K	125	-	-	22	+	-	4	+	+	HIGH
Vitamin B9 (Folic Acid)	86	-	-	12	+	-	11	+	+	MEDIUM-HIGH
Vitamin B12	23	-	-	9	+	-	1	+	+	MEDIUM-HIGH
Vitamin B7 (Biotin)	94	-	-	11	+	-	3	+	+	MEDIUM-HIGH
Vitamin B2	11	-	-	3	+	-	0	+	+	MEDIUM
Vitamin C	123	-	-	18	+	-	4	+	+	MEDIUM
Vitamin A	4	-	-	0	+	-	0	+	+	NORMAL

Vitamins need

Reduced Conversion of Beta Carotene to Retinol	3	-	-	0	+	-	1	+	+	HIGH
Absorption of Vitamin B12	1	-	-	3	+	-	0	+	+	MEDIUM
Riboflavin Deficiency	2	-	-	0	+	-	0	+	+	NORMAL
Biotinidase Deficiency	102	-	-	0	+	-	0	+	+	NORMAL

Weight

Benefit of Physical Exercise for Weight Loss	5	-	-	1	+	-	1	+	+	HIGH
Slimming with Restricted Carbohydrates Intake	6	-	-	0	+	-	1	+	+	HIGH
Fibers and slimming	2	-	-	0	+	-	1	+	+	HIGH
Intake of saturated fat and increased body fat	187	-	-	10	+	-	1	+	+	HIGH
Trend of Monounsaturated Fat Intake and Weight Gain	185	-	-	10	+	-	2	+	+	HIGH
Preference for fatty foods	2	-	-	3	+	-	0	+	+	HIGH
Binge Eating Disorder	0	-	-	1	+	-	1	+	+	HIGH
Obesity in Adolescents	2	-	-	0	+	-	1	+	+	HIGH
Greater Resistance to Weight Loss on Low Calorie Diets	1	-	-	0	+	-	1	+	+	HIGH
Weight loss with more protein than carbohydrate intake	186	-	-	10	+	-	0	+	+	HIGH
Weight loss and abdominal fat loss in caloric restriction	6	-	-	0	+	-	1	+	+	HIGH
Trend of Polyunsaturated Fat Intake and Weight Gain	170	-	-	8	+	-	0	+	+	HIGH
Preference for sweet foods	3	-	-	1	+	-	1	+	+	HIGH
Waist Measurement (in Women)	0	-	-	0	+	-	1	+	+	MEDIUM-HIGH

Name

Sample

Age

Gender

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Adiposity	186	-	-	10	+	-	1	+	+	MEDIUM-HIGH
Waist Measure	34	-	-	14	+	-	2	+	+	MEDIUM-HIGH
Slimness	2	-	-	0	+	-	1	+	+	MEDIUM-HIGH
Appetite and Satiety Control	4	-	-	2	+	-	0	+	+	MEDIUM-HIGH
Quantitative Body Mass Index (BMI)	25	-	-	7	+	-	3	+	+	MEDIUM-HIGH
Trend towards Higher Carbohydrate Consumption	5	-	-	0	+	-	1	+	+	MEDIUM-HIGH
Snacking Behaviour	1	-	-	1	+	-	0	+	+	MEDIUM
Weight Management	3	-	-	0	+	-	1	+	+	MEDIUM
Weight Loss with the Consumption of Complex Carbohydrates	1	-	-	2	+	-	0	+	+	MEDIUM
Ghrelin	13	-	-	3	+	-	0	+	+	NORMAL
Weight Loss on Fat Reduction Diets	4	-	-	1	+	-	0	+	+	NORMAL
Increased waist measurement with the habit of smoking a lot	1	-	-	0	+	-	0	+	+	NORMAL
Lower Weight Gain on High Fat Diets	1	-	-	0	+	-	0	+	+	NORMAL
Obesity (monogenic)	2	-	-	0	+	-	0	+	+	NORMAL
Trend of Higher Protein Consumption	2	-	-	0	+	-	0	+	+	NORMAL
Decrease in body mass after training	3	-	-	0	+	-	0	+	+	NORMAL
Reduction of body fat with intervention of polyphenols	0	-	-	1	+	-	0	+	+	NORMAL
Weight loss on low-fat diets	2	-	-	0	+	-	0	+	+	NORMAL
Preference for bitter foods	3	-	-	0	+	-	0	+	+	LOW



Name

Sample

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Gender

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Allergies

Gluten Sensitivity

HIGH

Gluten intolerance is when you get sick after eating gluten. You might feel bloated, gassy or tired. Gluten is a protein found in many foods, especially wheat. Gluten intolerance is also called non-celiac gluten sensitivity. It's not the same as celiac disease or a wheat allergy.Its main symptoms are diarrhea, abdominal pain, gas, weight loss, pain in the Skeletal System (bones) or joints, numbness in the legs, headaches, mental confusion, dermatitis and anemia

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CCR3	rs6441961	CC+	C	- -	
IL21-AS1	rs6840978	CT+	T	+ -	
KIAA1109	rs6822844	GT+	T	+ -	
LPP	rs1464510	GT-	A,T	+ -	
PUS10	rs13003464	AA+	G	- -	
RGS1	rs2816316	TT-	A	- -	
TAGAP	rs1738074	AA-	C	+ +	

Amino acids

L-arginine

NORMAL

Arginine is a basic amino acid, also known as 2-amino-5-guanidino-pentanoic acid or l-arginine. Stimulates the production of lymphocytes (which play an important role in the body's defense). In addition, arginine helps to inhibit the growth of many types of tumors; stimulates growth hormone secretion, helps to heal wounds; inhibits the loss of muscle mass after surgery; treats liver problems and diseases; it helps in the production of sperm and the building of new bone and tendon cells, treating arthritis and connective tissue disorders. Arginine is still present in the process of synthesis of nitric oxide, which produces vasodilation, taking more blood and oxygen to tissues and organs, contributing to their health. Research has even shown that arginine is effective in reducing anxiety symptoms. Result in orange or red indicates greater need.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ASL	rs28941472	AA+	G	- -	
INTERGENIC	rs2545801	AG-	C	- -	
SLC7A2	rs56335308	GG+	A	- -	

Name

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Serine Deficiency

NORMAL

Serine is a constituent amino acid of proteins (amino acid chains), which is not essential in the human diet, as it can be synthesized from other compounds. Its deficiency includes a group of inborn errors of metabolism in which there is a defect in this amino acid due to an alteration in its synthesis, preferentially affecting the nervous system. Serine also aids in the production of antibodies and immunoglobulin, molecules essential for maintaining a healthy immune system. Although in small amounts, to synthesize tryptophan, serine is required along with vitamins such as folic acid, vitamin B3 and vitamin B6. Tryptophan is, in turn, a precursor of serotonin, which regulates the mood and mood. It performs other functions related to the maintenance of skin hydration, synthesis of compounds such as porphyrin, creatine and purines. It is necessary for fat metabolism, correct functioning of cell replication, muscle development and is essential for the correct functioning of the immune system.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
PHGDH	rs478093	AG+	G	+ -	
PHGDH	rs121907987	GG+	A	- -	
PHGDH	rs121907988	GG+	A	- -	
PHGDH	rs267606949	CC+	A,G,T	- -	

L-carnitine Deficiency

NORMAL

L-carnitine deficiency can cause muscle necrosis, myoglobinuria, lipid storage myopathy, hypoglycemia, liver fat and hyperammonemia with muscle pain, fatigue, confusion and cardiomyopathy.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
SLC22A5	rs72552725	AA+	G	- -	

Antioxidants / Supplements

Name

Sample

Age

Gender

F

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Coenzyme Q10

HIGH

Coenzyme Q10, also known as ubiquinone or ubidecarenone, is a molecule naturally produced by our body and is present in high amounts in the cells of the heart, liver, kidneys and pancreas. This molecule is important for the proper functioning of the body, performing several functions: It increases energy production, reducing fatigue (tiredness); It has an antioxidant effect, protecting cells from possible damage; Improves cardiovascular function; Stimulates the immune system; Promotes skin cell renewal, delaying skin aging. However, the production of coenzyme Q10 decreases with age: up to 20 or 30 years this molecule is released by our body in high amounts, but after that age, its production is increasingly reduced. Thus, it is important to compensate for this decrease with the intake of foods that contain the molecule, such as meat, fish and vegetable oils.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCB1	rs1128503	CT-	G	- -	
ABCB1	rs3213619	TT-	G	- -	
ACE	rs4343	AG+	A	+ -	
ADD1	rs4961	GT+	A,T	+ -	
ADRB2	rs1800888	CC+	T	- -	
APOE	rs7412	TT+	T	+ +	
APOE4	rs429358	TT+	C	- -	
ATP2B1	rs2681472	CT-	G	- -	
BAG3	rs2234962	CT+	C	- -	
BRAP	rs3782886	AA-	C	- -	
BTD	rs104893686	TT+	G	- -	
BTD	rs104893687	CC+	T	- -	
CAT	rs1001179	AA-	T	+ +	
CCL2	rs1024611	CT-	G	+ -	
CDH13	rs8055236	GG+	A,C,T	+ +	
CDKN2B-AS1	rs1011970	GT+	T	- -	
CDKN2B-AS1	rs1063192	TT-	A,T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CDKN2B-AS1	rs10757272	TT+	T	+ +	
CDKN2B-AS1	rs10757274	GG+	G	+ +	
CELSR2	rs4970834	CC+	T	- -	
CETP	rs5882	AG+	A	+ -	
CETP	rs2303790	AA+	G	- -	
COQ2	rs121918230	AA-	C	- -	
COQ2	rs121918231	GG-	T	- -	
COQ2	rs121918232	AA-	C	- -	

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COQ2	rs121918233	GG-	T	- -	
COQ4	rs143441644	CC+	T	- -	
COQ6	rs189840848	CC+	G,T	- -	
COQ8A	rs119468004	GG+	A,C	- -	
COQ8A	rs119468005	CC+	T	- -	
COQ8A	rs145034527	CC+	T	- -	
COQ8A	rs387906298	DD+	G	- -	
COQ8A	rs387906299	II+		- -	
COQ8A	rs578189699	CC+	T	- -	
COQ8A	rs771578775	CC+	T	- -	
COQ9	rs267606751	CC+	T	- -	
COQ9	rs786205897	II+		- -	
DMD	rs1800278	AA-	C	- -	
DMD	rs1801187	GG-	T	- -	
DNAJC5B	rs13279522	TT+	C	- -	
DPYD	rs1801266	CC-	A	- -	
DPYD	rs1801267	GG-	T	- -	
DPYD	rs1801268	GG-	A	- -	
DSG2	rs2230234	AA+	G,T	- -	
F12	rs1801020	CT-	G	+ -	
F7	rs6046	CT-	A	- -	
FMN2	rs17672135	TT+	C	+ +	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
IL-4	rs2243250	CC+	T	- -	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs2943634	AC+	C,G	- -	
INTERGENIC	rs10757278	GG+	G	+ +	
ITGB3	rs5918	TT+	C	- -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	
KCNE3	rs2270676	CT-	G	- -	
KL	rs9536314	TT+	A,G	- -	

Name

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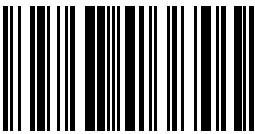
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LIPC	rs1800588	CC+	T	- -	
LPL	rs326	AG+	G	- -	
LRP8	rs5174	GG-	T	- -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MAT1A	rs118204001	TT-	C	- -	
MC1R	rs1805005	GG+	T	- -	
MC1R	rs1805007	CC+	T	- -	
MC1R	rs1805008	CC+	T	- -	
MC1R	rs1805009	GG+	A,C	- -	
MC4R	rs2229616	GG-	C	- -	
MMP3	rs3025058	DI+	G	+ -	
MRAS	rs2306374	TT+	C	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NAF1	rs7675998	GG+	G,T	- -	
NOS3	rs1800779	AA+	G	- -	
NPPA	rs5065	AA+	G	- -	
NQO1	rs1800566	CC-	A	- -	
NQO2	rs1143684	TT+	C	- -	
PACERR	rs689466	AG-	C	+ -	
PDSS2	rs118203956	CC-	A	- -	
PHACTR1	rs9349379	AA+	A	- -	
PLPP3	rs17114036	AA+	G	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SMAD3	rs17228212	TT+	C	- -	
STAT4	rs10181656	CG+	C	+ -	

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TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TNF	rs1800610	CT-	A	- -	
TNF	rs1800629	GG+	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TTN	rs2244492	GG-	T	- -	
TXNRD2	rs5748469	AA+	A	- -	

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Glutathione

HIGH

Evaluation of a set of genes associated with glutathione requirement. In orange or red, indicates an increased benefit from using glutathione or its precursors.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
A2M	rs669	AA-	C		
ABCA1	rs1883025	AG-	T		
ABCA7	rs3764650	TT+	G		
ABCA7	rs115550680	AA+	G		
ABCB1	rs1128503	CT-	G		
ABCB1	rs3213619	TT-	G		
ACE	rs4343	AG+	A		
ADD1	rs4961	GT+	A,T		
ADRB2	rs1800888	CC+	T		
ALDH2	rs671	GG+	A		
APOB	rs676210	AG+	A,T		
APOB	rs1367117	GG+	A		
APOC1	rs4420638	AA+	G		
APOE	rs7412	TT+	T		
APOE4	rs429358	TT+	C		
ARHGAP20	rs326946	TT-	C		
ARMS2	rs10490924	GT+	T		
ATM	rs664143	CC-	G,T		
ATP2B1	rs2681472	CT-	G		
B3GALT1	rs13020412	AA+	G		
BAG3	rs2234962	CT+	C		
BCO1	rs12934922	AA+	G,T		
BDNF	rs6265	GG-	T		
BIN1	rs744373	CT-	G		
BRAP	rs3782886	AA-	C		
BTD	rs104893686	TT+	G		
BTD	rs104893687	CC+	T		
C2	rs547154	CC-	T		
C2	rs9332739	GG+	A,C		
C3	rs2230199	CG-	C,T		

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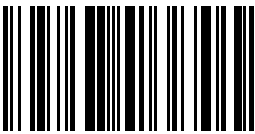
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Sample

C3	rs2230205	AG-	T	- -	
CCL2	rs1024611	CT-	G	+ -	
CD2AP	rs9349407	GG+	C	- -	
CD2AP	rs10948363	AA+	G	- -	
CDH13	rs8055236	GG+	A,C,T	+ +	
CDKN1A	rs1801270	CC+	A,T	- -	
CDKN2A	rs3731249	GG-	A,G,T	- -	
CDKN2B-AS1	rs1011970	GT+	T	- -	
CDKN2B-AS1	rs1063192	TT-	A,T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CDKN2B-AS1	rs10757272	TT+	T	+ +	
CDKN2B-AS1	rs10757274	GG+	G	+ +	
CETP	rs5880	GG+	C	- -	
CETP	rs5882	AG+	A	+ -	
CETP	rs708272	CT-	A	+ -	
CETP	rs1532624	TT-	A	- -	
CETP	rs1864163	GG+	A	- -	
CETP	rs2303790	AA+	G	- -	
CFB	rs4151667	TT+	A	- -	
CFH	rs800292	CT-	A	+ -	
CFH	rs1061147	CC+	C	- -	
CFH	rs1061170	TT+	T	- -	
CFH	rs1065489	GT+	T	- -	
CFH	rs1329428	AG-	T	- -	
CFH	rs3753394	CT+	T	- -	
CHAT	rs733722	CC+	A,G,T	- -	
CLPTM1L	rs401681	CT+	T	+ -	
CLU	rs11136000	CC+	C	- -	
COL6A4P1	rs7639618	TT+	T	+ +	
COL8A1	rs13081855	GG+	T	- -	
CPS1	rs1047891	CC+	A	- -	
CR1	rs3818361	CC-	G	- -	
CR1	rs6656401	GG+	G,T	- -	
CRTC1	rs10419226	GT+	G	- -	
CRYBB3	rs74315490	GG+		- -	

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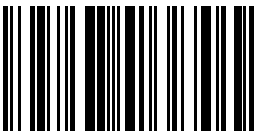
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Sample

CSMD1	rs10503253	CC+	A	- -	
CX3CR1	rs3732378	AG+	A	+ -	
CX3CR1	rs3732379	CT+	T	- -	
CYP1A1	rs1048943	AA-	A,C,G	- -	
CYP1A1	rs1800031	TT-	G	- -	
CYP1A1	rs41279188	CC-	A,T	- -	
CYP1A1	rs56313657	GG-	A,T	- -	
CYP1A1	rs72547509	TT-	G,T	- -	
CYP1B1	rs1056836	CC-	C	- -	
CYP2E1	rs2070673	TT+	T	- -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A5	rs776746	AG-	C	+ -	
DCLK1	rs7328278	AA+	C	- -	
DEF8	rs4268748	CT+	C	- -	
DIRC3	rs966423	CT+	G,T	+ -	
DMD	rs1800278	AA-	C	- -	
DMD	rs1801187	GG-	T	- -	
DNAJC5B	rs13279522	TT+	C	- -	
DPYD	rs1801266	CC-	A	- -	
DPYD	rs1801267	GG-	T	- -	
DPYD	rs1801268	GG-	A	- -	
DSG2	rs2230234	AA+	G,T	- -	
E2F3	rs1570155	AG+	A,T	+ -	
EPHA2	rs3754334	CC-	A	- -	
EPHA2	rs116506614	CC+		- -	
EPHX1	rs1051740	TT+	C	- -	
EPHX1	rs2234922	AG+	G,T	+ -	
ERI1	rs96621	CT+	C	- -	
F12	rs1801020	CT-	G	+ -	
F7	rs6046	CT-	A	- -	
FASLG	rs763110	TT+	T	- -	
FMN2	rs17672135	TT+	C	+ +	
FRMD4A	rs10906466	AG+	C,G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs121918214	GG+	A	- -	

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G6PD	rs1050828	CC+	T	- -	
GAB2	rs2373115	GG-	A	- -	
GCKR	rs1260326	CT+	C	+ -	
GCLC	rs17883901	CC-	A,T	- -	
GDF5	rs143383	CT-	A	+ -	
GOLM1	rs7019241	CT+	G,T	- -	
GOLM1	rs10868366	GT+	T	- -	
GPX1	rs1050450	CC-	A	- -	
GSTP1	rs1695	GG+	G	+ +	
HDAC4	rs3791406	CT+	C	+ -	
HLA-DQB1	rs7775228	TT+	C	- -	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
HTRA1	rs11200638	AG+	A	+ -	
IL-1B	rs16944	AG+	G	+ -	
IL-1RN	rs9005	GG+	A	- -	
IL-1RN	rs419598	TT+	C	- -	
IL-4	rs2243250	CC+	T	- -	
IL-6	rs1800795	CG+	G	- -	
IL-6	rs1800796	GG+	C	- -	
IL-6	rs1800797	AG+	G	+ -	
INTERGENIC	rs493258	AG-	C	+ -	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs4140564	AA+	A	- -	
INTERGENIC	rs9287638	CC+	A	- -	
INTERGENIC	rs10468017	CC+	T	- -	
INTERGENIC	rs10757278	GG+	G	+ +	
INTERGENIC	rs12661968	TT+	C	- -	
INTERGENIC	rs12678919	AA+	G	- -	
IRF4	rs12203592	CC+	T	- -	
ITGB3	rs5918	TT+	C	- -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	

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KCNE3	rs2270676	CT-	G	- -	
KL	rs9536314	TT+	A,G	- -	
KLF6	rs3750861	CC+	T	- -	
LDLR	rs688	CC+	T	- -	
LMNA	rs553016	GG-	G,T	- -	
LRP6	rs2160525	AG+	G	- -	
LRP8	rs5174	GG-	T	- -	
LTA	rs1799724	CT+	T	+ -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MC1R	rs1805005	GG+	T	- -	
MC1R	rs1805007	CC+	T	- -	
MC1R	rs1805008	CC+	T	- -	
MC1R	rs1805009	GG+	A,C	- -	
MCF2L	rs11842874	AA+	G	- -	
MMP3	rs3025058	DI+	G	+ -	
MPO	rs2333227	TT+	T	- -	
MRAS	rs2306374	TT+	C	- -	
MS4A6A	rs610932	CC-	G	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
MTRR	rs1801394	AA+	G	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NAF1	rs7675998	GG+	G,T	- -	
NOS3	rs1800779	AA+	G	- -	
NOTCH4	rs422951	AG-	C	- -	
NPPA	rs5065	AA+	G	- -	
NQO1	rs1800566	CC-	A	- -	
PCDH11X	rs5984894	AA+	G	- -	

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PCK1	rs8192708	AG+	G	+ -	
PHACTR1	rs9349379	AA+	A	- -	
PICALM	rs3851179	AG-	C	+ -	
PICALM	rs10792832	AG+	G	+ -	
PIK3CA	rs2699887	CT+	T	- -	
PIK3CA	rs104886003	GG+	A,C	- -	
PIK3CA	rs1057519942	GG+	A	- -	
PITX2	rs6533526	GG+	A	- -	
PLAU	rs2227562	GG+	A	- -	
PLAU	rs2227564	TT+	C	- -	
PLD3	rs145999145	GG+	A	- -	
PLPP3	rs17114036	AA+	G	- -	
PNPLA3	rs738409	GG-	G	- -	
PNPLA3	rs6006460	GG+	T	- -	
POLN	rs1923775	TT+	T	- -	
PPARG	rs17036170	GG+	A	- -	
PPARGC1A	rs2290602	GG+	A,G	- -	
PPP1R3B	rs3748140	GG-	T	- -	
PPP1R3B	rs9987289	GG+	G	- -	
PRRC2C	rs2421847	AA+	G	- -	
PSEN1	rs63749824	CC+	G,T	- -	
PSEN2	rs63750197	CC+	T	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
PTEN	rs121909229	GG+	A,C,T	- -	
PTEN	rs121909232	CC+	G	- -	
REST	rs1713985	AC-	T	- -	
REST	rs2227902	GG+	T	- -	
RNASEL	rs3738579	CT-	G	+ -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	
SERPINF1	rs1136287	CT+	T	+ -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SKIV2L	rs429608	GG+	A	- -	
SKIV2L	rs2734331	TT-	G	- -	

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SLC39A6	rs1050631	CT-	A	+ -	
SLC45A2	rs185146	CT+	T	+ -	
SMAD3	rs17228212	TT+	C	- -	
SOD3	rs1799895	CC+	G	- -	
SOD3	rs2855262	TT+	C	- -	
STAT4	rs10181656	CG+	C	+ -	
TERT	rs2736098	AG-	T	+ -	
TLR3	rs3775291	GG-	G,T	+ +	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TNF	rs1800629	GG+	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TREM2	rs75932628	CC+	A,T	- -	
TTN	rs2244492	GG-	T	- -	
TXNRD2	rs5748469	AA+	A	- -	
VEGFA	rs3025039	CC+	T	- -	
XPC	rs2228000	CC-	A	- -	
XPC	rs2228001	AA-	T	- -	
XRCC1	rs1799782	CT-	A	+ -	
ZNF648	rs10911021	CT+	C	+ -	

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Health insurance



Need for a diet rich in antioxidants

MEDIUM-HIGH

Evaluation of a set of genes associated with your genetic need for a higher consumption of antioxidants. Increased need is indicated in orange or red.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CAT	rs1001179	AA-	T		
GPX1	rs1050450	CC-	A		
HTRA1	rs11200638	AG+	A		
NAT1	rs4986782	GG+	A		
NAT1	rs4986783	TT+	G		
NAT1	rs4987076	GG+	A,C		
NAT1	rs5030839	CC+	T		
NAT1	rs28359483	GG+	A,C		
NAT1	rs55793712	AA+	C,G,T		
NAT1	rs56172717	AA+	T		
NAT1	rs56318881	CC+	T		
PON1	rs662	AG-	C		
SOD2	rs4880	CT-	G		
SOD2	rs4516970	GG+	A		
XRCC1	rs25489	GG-	G,T		
XRCC1	rs1799782	CT-	A		

Cardiovascular

Familial Hyperlipoproteinemia Type III

HIGH

It is an increase in certain lipoproteins. If lipoproteins are not depleted, they accumulate with fats in the blood and this excess leads to an increase in cardiovascular risk.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
APOE	rs7412	TT+	T		
APOE	rs387906567	CC+	G,T		

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Hereditary familial hypercholesterolemia

MEDIUM

Metabolic disorder of autosomal dominant inheritance that results in an increase in the level of bad cholesterol (LDL) in the blood. The result shows genetic susceptibility to hereditary familial hypercholesterolemia, but not diagnosis.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs12003906	GG+	C,T	- -	
APOB	rs676210	AG+	A,T	- -	
APOB	rs1042031	GG-	A,T	- -	
APOB	rs1042034	AG-	T	- -	
APOB	rs1367117	GG+	A	- -	
APOB	rs12713559	CC-	A	- -	
APOB	rs144467873	GG+		- -	
APOC3	rs5128	CG-	G	+ -	
LDLR	rs688	CC+	T	- -	
LDLR	rs5925	TT+	C	- -	
LDLR	rs5930	AA+	G	- -	
LDLRAP1	rs6687605	TT+	A,C,G	- -	
PCSK9	rs562556	AA+	A	- -	
PCSK9	rs11591147	GG+	A,T	+ +	

Hypercholesterolemia (Type B)

NORMAL

Increased blood cholesterol concentration. It is a form of hyperlipidemia (high blood lipids) and hyperlipoproteinemia (high blood lipoproteins).

Gene	RSID	Genotype	Minor Allele	Alteration	Result
APOB	rs5742904	GG-	A,T	- -	
APOB	rs12713559	CC-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
LDLR	rs28941776	GG+	A,T	- -	
LDLR	rs28942081	GG+	A,T	- -	
LDLR	rs28942082	GG+	A,C,T	- -	

Cardiovascular and Cerebrovascular

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Hypertension

 MEDIUM-HIGH

Also called High Blood Pressure, it is a condition in which the force of the blood against the wall of the arteries is too great.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ACE	rs4343	AG+	A		
ADD1	rs4961	GT+	A,T		
ADD1	rs4963	CG+	G,T		
AGT	rs699	CT-	G		
AGT	rs5051	CT+	T		
AGTR1	rs5186	AA+	C		
APOE4	rs429358	TT+	C		
ATP2B1	rs7965584	AG+	G		
CNNM2	rs11191548	TT+			
CYP11B2	rs1799998	TT-	G		
CYP17A1	rs1004467	TT-			
EDN1	rs5370	GT+	T		
GRK4	rs1024323	GG-	T		
GRK4	rs2960306	GG+	T		
IL-6	rs1800795	CG+	G		
NEDD4L	rs2288774	CT+	A,C		
NEDD4L	rs3865418	CC+	C		
NEDD4L	rs4149601	AA+	A		
NOS3	rs1799983	GG+	T		
NOS3	rs1800779	AA+	G		
STK39	rs6749447	GT+	G		
TRPM6	rs11144134	CT+	C		
UMOD	rs13333226	AA+	A		

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Sensitivity to Salt (Hypertension)

MEDIUM

Indication in orange or red indicates that reducing sodium intake can help control blood pressure.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ACE	rs4341	CG+	C	+ -	
ACE	rs4343	AG+	A	+ -	
AGT	rs699	CT-	G	+ -	
CYP11B2	rs4545	AG-	T	- -	
KL	rs9536314	TT+	A,G	- -	
NAA10	rs1557501	CT+	T	+ -	
NPPA	rs5063	GG-	T	- -	

Diabetes

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Type 2 diabetes

HIGH

Type 2 Diabetes is a chronic disease that affects the way the body metabolizes glucose, the body's main source of energy. A person with type 2 diabetes may be resistant to the effects of insulin - the hormone that regulates the entry of sugar into cells - or not produce enough insulin to maintain a normal glucose level. Result and orange or red indicate increased risk of type 2 diabetes.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADCY5	rs11708067	AA+	G		
ADIPOQ	rs1501299	CC-	A		
ADIPOQ	rs17366743	TT+	C		
ADRB2	rs1042714	GT+	C,T		
AKT1	rs1130214	GT-	C		
CAPN10	rs3792267	GG+	A		
CDKAL1	rs4712523	AG+	G		
CDKAL1	rs4712524	AG+	G		
CDKAL1	rs7754840	CG+	C		
CDKAL1	rs7756992	AG+	G,T		
CDKN2A	rs7020996	CC+	C		
CDKN2A	rs10811661	TT+	T		
CDKN2A/B	rs2383208	AA+	G,T		
ENPP1	rs1044498	AC+	C		
FTO	rs1121980	CC-	A		
FTO	rs8050136	CC+	A		
FTO	rs9930506	AA+	G		
FTO	rs9939609	TT+	A		
FTO	rs11642841	CC+	A		
GAD1	rs2241165	AA-	T		
GCK	rs4607517	GG+	A,C		
GCKR	rs780094	AG-	C		
GPX1	rs1050450	CC-	A		
HHEX	rs5015480	TT+	T		
HNF1B	rs757210	AG-	G,T		
IGF2BP2	rs4402960	GG+	T		
INSIG2	rs7566605	GG+	C		
IRS1	rs2943641	CT+	C		

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JAZF1	rs1635852	CT+	C	- -	●
KCNJ11	rs5215	TT+	T	- -	●
KCNJ11	rs5219	CC+	T	- -	●
KCNQ1	rs2237892	CC+	T	+ +	●
KCNQ1	rs2283228	AA+	C	- -	●
KCNQ1	rs104894252	GG+	A,C	- -	●
LEPR	rs1137101	AA+	G	- -	●
MTNR1B	rs10830963	CC+	G	- -	●
NAF1	rs7675998	GG+	G,T	- -	●
PAX4	rs2233580	GG-	T	- -	●
PEX5L	rs7630877	GG+	A,C	- -	●
PPARG	rs1801282	CG+	C	+ -	●
PPARG	rs3856806	CC+	T	- -	●
RPSAP52	rs1531343	CC+	C,T	- -	●
SDHAF4	rs1048886	AA+	G	- -	●
SLC2A4	rs121434581	GG+	A,C	- -	●
SLC30A8	rs13266634	CC+	A,T	+ +	●
TCF2	rs4430796	AG+	G	+ -	●
TCF7L2	rs7901695	TT+	C	- -	●
TCF7L2	rs7903146	CC+	G,T	- -	●
TCF7L2	rs12255372	GG+	T	- -	●
THADA	rs7578597	TT+	C	- -	●
UBE2E2	rs7612463	AC+	A,G	- -	●

Obesity in Type 2 Diabetes Patients

●

MEDIUM-HIGH

Scientific studies associate obesity and increased waist size in patients with Type 2 Diabetes.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GRB14	rs8192673	AG-	C	+ -	●



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Fasting Glucose Level Increase

MEDIUM

Fasting glucose, or fasting glucose, is a blood test that measures the rate of glucose in the bloodstream and needs to be done after a fast of 8 to 12 hours, or as directed by the doctor, without consumption of any food or drink except water. This test is widely used to investigate the diagnosis of diabetes, and to monitor the blood sugar levels of people who are diabetic or at risk for this disease. Some people are more prone to higher fasting glucose levels.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AKT1	rs1130214	GT-	C	- -	
FTO	rs17817449	TT+	A,G	- -	
GCG	rs4664447	AA-	C	- -	
GLP1R	rs10305492	GG+	A	- -	
PROX1	rs340874	AG-	C	+ -	
QPCTL	rs2287019	CC+	T	+ +	

Endocrine system

Benefit of adopting a low glycemic index diet

HIGH

If it is in green or blue, consider that it is very important to adopt a low glycemic load and insulinemic diet. Results in red is beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADCY5	rs11708067	AA+	G	+ +	

Essential Amino Acids

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L-tryptophan

MEDIUM-HIGH

Tryptophan is an essential amino acid that serves several important purposes, like nitrogen balance in adults and growth in infants. It's also used to produce niacin, which is essential in creating the neurotransmitter serotonin. There are two types of tryptophan: L-tryptophan and D-tryptophan. The only difference between the two types is the orientation of the molecule. L-tryptophan is used for insomnia, sleep apnea, depression, anxiety, facial pain, a severe form of premenstrual syndrome called premenstrual dysphoric disorder (PMDD), smoking cessation, grinding teeth during sleep (bruxism), attention deficit-hyperactivity disorder (ADHD), Tourette's syndrome, and to improve athletic. Tryptophan can be found in some foods, especially those high in protein. Foods known to be high in tryptophan include: chicken, eggs, cheese, fish, peanuts, pumpkin and sesame seeds, milk, turkey, tofu and soy.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCB1	rs1128503	CT-	G	- -	●
ABCB1	rs2032583	TT-	G	+ +	●
ABCB1	rs2235015	GG-	A,T	+ +	●
ABCB1	rs2235040	GG-	A,G,T	+ +	●
ABCB1	rs2235067	GG-	T	+ +	●
ABCB1	rs3213619	TT-	G	- -	●
ABCB1	rs4148739	AA-	C	+ +	●
ABCB1	rs10248420	AA+	G,T	+ +	●
ABCB1	rs11983225	TT+	C	+ +	●
ADA	rs73598374	GG-	A,G,T	- -	●
BDNF	rs6265	GG-	T	- -	●
CHRM2	rs324650	AT+	A	+ -	●
CHRM2	rs1824024	GT-	A	+ -	●
CHRM2	rs2061174	CT-	A,C	- -	●
CLOCK	rs1801260	AA+	C,G,T	- -	●
DTNBP1	rs2619522	GT-	C	- -	●
FKBP5	rs1360780	CC+	A,C	- -	●
GPHN	rs104894470	CC+	T	- -	●
HTR2A	rs6314	CC-	A	+ +	●
HTR2A	rs1328674	AG-	C,G	- -	●
HTR2C	rs3813929	CC+	G,T	- -	●
IL-1B	rs16944	AG+	G	+ -	●
INTERGENIC	rs1545843	AG+	A	+ -	●
KIAA0319	rs761100	TT-	C	- -	●
KIAA0319	rs4504469	CC+	G,T	- -	●

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MAOA	rs909525	GG-	T	+ +	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
NGF	rs6330	CC-	A	- -	
OXTR	rs237899	GG+	A,C	- -	
OXTR	rs2254298	GG+	A	- -	
RGS2	rs4606	CC+	G	+ +	
SLC2A13	rs1005956	TT+	C	- -	
SOD2	rs4880	CT-	G	- -	
TDP2	rs2143340	TT-	G,T	- -	
TPH1	rs1799913	AC-	A,T	- -	
TPH2	rs4565946	CT+	A,G,T	- -	
TPH2	rs4570625	GT+	G	+ -	
VDR	rs1544410	AG-	C,T	- -	

L-lysine

LOW

Collagen is made up of three main amino acids: proline, glycine and lysine (which forms hydroxyproline). Lysine is an essential amino acid, which means the human body cannot make it. Lysine appears increased in cases of autism. These changes produce an imbalance with the remaining amino acids that compete in the blood-brain barrier for the same transport system, affecting the metabolism and transport of these amino acids to the brain and, therefore, the CNS function. The decrease in phenylalanine and the increase in glycine seem to support the hypothesis of an inhibitory neurotransmission disorder in both disorders, but mainly in ADHD. The decrease in phenylalanine and the increase in lysine in autistic individuals suggests that these two amino acids are metabolically related.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ASS-1	rs2215359	CC+	T	- -	
ASS-1	rs4140745	TT+	T	- -	
ASS-1	rs10488107	AA+	G	- -	
INTERGENIC	rs9549153	GG+	A	- -	
SCCPDH	rs6657743	CC+	T	- -	
SCCPDH	rs7513496	GG+	T	- -	
SCCPDH	rs10924820	AG+	T	- -	
SLC7A9	rs12460876	CC+	C	- -	

Fatty acids

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Omega 6

HIGH

Omega 6 mainly serves to reduce bad cholesterol (LDL) and triglycerides, helping to prevent cardiovascular disease, heart attack and stroke. The benefits of omega 6 are mainly related to its effect on blood vessels, preventing the formation of clots that can detach from the artery wall and obstruct blood flow (thrombosis), causing myocardial infarction (heart attack) and accident cerebral vascular ("stroke"). Omega 6 also prevents the deposition of fat (cholesterol) in artery walls, a condition called atherosclerosis, considered one of the main causes of myocardial infarction. In addition, omega 6 acts positively on the immune system, body temperature regulation and body water loss. Also known as linoleic acid, omega 6 is a polyunsaturated fatty acid, a type of "good" fat found in some foods in the form of oils. Like omega 3, omega 6 is considered essential as it is not produced by the body and therefore needs to be ingested through food. The main sources of omega 6 are sunflower, corn and soybean oils, nuts and walnuts.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ABCB1	rs1128503	CT-	G	- -	
ABCB1	rs2032583	TT-	G	+ +	
ABCB1	rs2235015	GG-	A,T	+ +	
ABCB1	rs2235040	GG-	A,G,T	+ +	
ABCB1	rs2235067	GG-	T	+ +	
ABCB1	rs3213619	TT-	G	- -	
ABCB1	rs4148739	AA-	C	+ +	
ABCB1	rs10248420	AA+	G,T	+ +	
ABCB1	rs11983225	TT+	C	+ +	
ABCG2	rs2231137	GG-	T	+ +	
ABCG2	rs72552713	GG+	A	- -	
ABCG8	rs6544713	CC+	C	- -	
ACE	rs4343	AG+	A	+ -	
ACP7	rs472265	AA+	G	- -	
ADA	rs73598374	GG-	A,G,T	- -	
ADAMTS12	rs469568	TT-	C	+ +	
ADAMTS12	rs1364044	TT+	A,T	+ +	
ADCY5	rs11708067	AA+	G	- -	
ADD1	rs4961	GT+	A,T	+ -	
ADD1	rs4963	CG+	G,T	- -	
ADD2	rs3755351	CC-	T	- -	
ADIPOQ	rs17366743	TT+	C	- -	
ADRB2	rs1042714	GT+	C,T	- -	
ADRB2	rs1800888	CC+	T	- -	

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AGT	rs699	CT-	G	+ -	
AGTR1	rs5186	AA+	C	- -	
APOC1	rs4420638	AA+	G	- -	
APOE	rs7412	TT+	T	+ +	
APOE4	rs429358	TT+	C	- -	
AR	rs5031002	GG+	A	- -	
ATP2B1	rs2681472	CT-	G	- -	
ATP2B1	rs7965584	AG+	G	- -	
BAG3	rs2234962	CT+	C	- -	
BAG6	rs3117583	TT-	G	- -	
BDNF	rs6265	GG-	T	- -	
BRAP	rs3782886	AA-	C	- -	
BRCA2	rs4942486	CT+	C	+ -	
BTD	rs104893686	TT+	G	- -	
BTD	rs104893687	CC+	T	- -	
CAPN10	rs3792267	GG+	A	- -	
CASZ1	rs880315	AA-	C	- -	
CBS	rs2851391	CT+	C	+ -	
CBS	rs5742905	TT-	G	- -	
CBS	rs28934891	GG-	T	- -	
CCL2	rs1024611	CT-	G	+ -	
CDH13	rs8055236	GG+	A,C,T	+ +	
CDKAL1	rs4712523	AG+	G	- -	
CDKAL1	rs7756992	AG+	G,T	- -	
CDKN2A	rs10811661	TT+	T	+ +	
CDKN2A/B	rs2383208	AA+	G,T	- -	
CDKN2B-AS1	rs1011970	GT+	T	- -	
CDKN2B-AS1	rs1063192	TT-	A,T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CDKN2B-AS1	rs10757272	TT+	T	+ +	
CDKN2B-AS1	rs10757274	GG+	G	+ +	
CETP	rs2303790	AA+	G	- -	
CHRM2	rs324650	AT+	A	+ -	
CHRM2	rs1824024	GT-	A	+ -	
CHRM2	rs2061174	CT-	A,C	- -	

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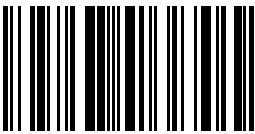
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CLOCK	rs1801260	AA+	C,G,T	- -	●
CPS1	rs1047891	CC+	A	- -	●
CR1L	rs4844614	GT+	T	+ -	●
CYP51A1	rs1041296	TT-	G	- -	●
DAPK1	rs11141915	AC+	C	- -	●
DMD	rs1800278	AA-	C	- -	●
DMD	rs1801187	GG-	T	- -	●
DNAH11	rs12670798	TT+	C	- -	●
DNAJC5B	rs13279522	TT+	C	- -	●
DNER	rs1861612	AG+	A,C	- -	●
DSG2	rs2230234	AA+	G,T	- -	●
F12	rs1801020	CT-	G	+ -	●
F13B	rs6003	AA-	T	- -	●
F2	rs1799963	GG+	A	- -	●
F5	rs4524	AG-	C	- -	●
F5	rs6025	GG-	T	- -	●
F5	rs7542281	CT+	T	- -	●
F7	rs6046	CT-	A	- -	●
FABP2	rs1799883	GG-	A,C,G	- -	●
FADS1	rs174546	CC+	T	- -	●
FADS2	rs174570	CC+	T	- -	●
FKBP5	rs1360780	CC+	A,C	- -	●
FMN2	rs17672135	TT+	C	+ +	●
FTO	rs1121980	CC-	A	- -	●
GAD1	rs701492	TT+	T	- -	●
GAD1	rs2241165	AA-	T	- -	●
GCK	rs4607517	GG+	A,C	- -	●
GCKR	rs780094	AG-	C	- -	●
GPHN	rs104894470	CC+	T	- -	●
GPX1	rs1050450	CC-	A	- -	●
HABP2	rs7080536	GG+	A	- -	●
HDAC9	rs2073963	GT+	G	+ -	●
HHEX	rs5015480	TT+	T	- -	●
HIVEP2	rs761993070	CC+	A,G,T	- -	●
HTR2A	rs6314	CC-	A	+ +	●

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HTR2A	rs1328674	AG-	C,G	- -	
HTR2C	rs3813929	CC+	G,T	- -	
IGF2BP2	rs4402960	GG+	T	- -	
IL-1B	rs16944	AG+	G	+ -	
IL-4	rs2243250	CC+	T	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs751891	CC-	T	- -	
INTERGENIC	rs791595	AG+	G	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs1545843	AG+	A	+ -	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs2820037	AA+	T	- -	
INTERGENIC	rs7923837	AA+	A,T	- -	
INTERGENIC	rs10757278	GG+	G	+ +	
IRS1	rs2943641	CT+	C	+ -	
ITGA11	rs7174755	TT+	C,G	- -	
ITGB3	rs5918	TT+	C	- -	
JAZF1	rs1635852	CT+	C	- -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	
KCNE3	rs2270676	CT-	G	- -	
KCNJ11	rs5215	TT+	T	- -	
KCNJ11	rs5219	CC+	T	- -	
KCNQ1	rs2283228	AA+	C	- -	
KCNQ1	rs104894252	GG+	A,C	- -	
KL	rs9536314	TT+	A,G	- -	
LDLR	rs6511720	GG+	T	- -	
LEPR	rs1137101	AA+	G	- -	
LPL	rs268	AA+	G	- -	
LRP8	rs5174	GG-	T	- -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MMP3	rs3025058	DI+	G	+ -	

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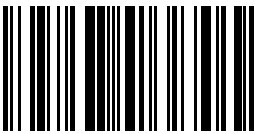
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MOV10	rs2932538	CC-	C,G	- -	●
MRAS	rs2306374	TT+	C	- -	●
MTHFD1	rs1076991	AG-	C,G	+ -	●
MTHFD1L	rs6922269	AG+	A	+ -	●
MTHFD1L	rs11754661	GG+	A,T	- -	●
MTHFD1L	rs17349743	TT+	C	- -	●
MTHFR	rs1476413	AG-	G,T	+ -	●
MTHFR	rs1801131	AC-	G	+ -	●
MTHFR	rs1801133	CC-	A	- -	●
MTNR1B	rs10830963	CC+	G	- -	●
MTRR	rs1801394	AA+	G	- -	●
MYBPC3	rs11570112	CC-	A,C	- -	●
NAA25	rs17696736	AA+	G	- -	●
NAF1	rs7675998	GG+	G,T	- -	●
NEDD4L	rs2288774	CT+	A,C	- -	●
NEDD4L	rs3865418	CC+	C	- -	●
NEDD4L	rs4149601	AA+	A	- -	●
NFE2L2	rs6721961	GG+	C,G	- -	●
NFE2L2	rs35652124	CT+	C	- -	●
NGF	rs6330	CC-	A	- -	●
NGF	rs11466112	CC-	A	- -	●
NINJ2	rs12425791	AG+	A,C	+ -	●
NOS3	rs1799983	GG+	T	- -	●
NOS3	rs1800779	AA+	G	- -	●
NOV	rs2071518	CC+	T	- -	●
NPPA	rs5065	AA+	G	- -	●
OPRM1	rs1799971	GG+	G	+ +	●
OXTR	rs237899	GG+	A,C	- -	●
OXTR	rs2254298	GG+	A	- -	●
PAX4	rs2233580	GG-	T	- -	●
PDE4D	rs966221	CT-	G	- -	●
PEX5L	rs7630877	GG+	A,C	- -	●
PHACTR1	rs9349379	AA+	A	- -	●
PITX2	rs2200733	CT+	T	+ -	●
PITX2	rs12646447	CT+	C	+ -	●

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PLPP3	rs17114036	AA+	G	- -	
PPARG	rs1801282	CG+	C	+ -	
PPARGC1A	rs8192678	GG-	T	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
RASGRP1	rs7403531	CC+	C,G	- -	
RHOU	rs6426514	GG+	A	- -	
RPSAP52	rs1531343	CC+	C,T	- -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	
SDHAF4	rs1048886	AA+	G	- -	
SELE	rs5361	AC-	G	- -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SHMT1	rs1979277	AG+	A	- -	
SLC30A8	rs13266634	CC+	A,T	+ +	
SMAD3	rs17228212	TT+	C	- -	
SOD2	rs4880	CT-	G	- -	
SPSB4	rs16851055	GG+	A	- -	
STK39	rs6749447	GT+	G	+ -	
SUPT3H	rs556621	AC-	G	+ -	
TAP2	rs241428	AA-	A,C,G	- -	
TAP2	rs1800454	GG-	T	- -	
TCF7L2	rs7901695	TT+	C	- -	
TCF7L2	rs7903146	CC+	G,T	- -	
TCF7L2	rs12255372	GG+	T	- -	
TGFBR3	rs1805110	CC-	A	- -	
THADA	rs7578597	TT+	C	- -	
THBD	rs1042580	AG-	C	- -	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TNF	rs361525	GG+	A	+ +	
TNF	rs1800629	GG+	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	

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TPH1	rs1799913	AC-	A,T	- -	
TRIB3	rs2295490	AG+	G,T	+ -	
TRIM29	rs2084898	GG+	A	- -	
TRPM6	rs11144134	CT+	C	+ -	
TTN	rs2244492	GG-	T	- -	
TXNRD2	rs5748469	AA+	A	- -	
UBE2E2	rs7612463	AC+	A,G	- -	
VCAN	rs173686	CT-	G,T	+ -	
VPS26A	rs4812829	AG+	A	- -	
WDR12	rs6725887	TT+	C	- -	
WSCD2	rs9739493	CC+	C,G	- -	
ZFHX3	rs7193343	CC+	A,C	- -	

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Omega 3

HIGH

Omega-3s are nutrients you get from food (or supplements) that help build and maintain a healthy body. They're key to the structure of every cell wall you have. They're also an energy source and help keep your heart, lungs, blood vessels, and immune system working the way they should. Two crucial ones -- EPA and DHA -- are primarily found in certain fish. ALA (alpha-linolenic acid), another omega-3 fatty acid, is found in plant sources such as nuts and seeds. DHA levels are especially high in retina (eye), brain, and sperm cells. Not only does your body need these fatty acids to function, they also deliver some big health benefits. fish oil can lower elevated triglyceride levels. Having high levels of this blood fat puts you at risk for heart disease and stroke. Also fish oil supplements (EPA+DHA) may curb stiffness and joint pain. Omega-3 supplements also seem to boost the effectiveness of anti-inflammatory drugs. Omega-3s build up cell walls, and when levels are too low, you may experience dry skin, brittle hair, and thin nails that peel and crack. Omega-3 deficiency can cause rashes on the skin and dandruff as well. Fatigue and trouble sleeping. Symptoms of omega-3 fatty acid deficiency include fatigue, poor memory, dry skin, heart problems, mood swings or depression, and poor circulation. It is important to have the proper ratio of omega-3 and omega-6 (another essential fatty acid) in the diet.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ADRB2	rs1042713	GG+	A	+ +	
ADRB2	rs1800888	CC+	T	- -	
AGT	rs699	CT-	G	+ -	
APOA1	rs670	AG-	T	+ -	
APOA5	rs651821	TT+	T	- -	
APOA5	rs662799	AA+	T	- -	
APOA5	rs2266788	TT-	A	- -	
APOA5	rs3135506	GG+	C	- -	
APOC3	rs5128	CG-	G	+ -	
APOE	rs7412	TT+	T	+ +	
APOE4	rs429358	TT+	C	- -	
ARMS2	rs10490924	GT+	T	+ -	
BRAP	rs3782886	AA-	C	- -	
C2	rs547154	CC-	T	- -	
C2	rs9332739	GG+	A,C	- -	
C3	rs2230199	CG-	C,T	+ -	
C3	rs2230205	AG-	T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CETP	rs5880	GG+	C	- -	
CETP	rs5882	AG+	A	+ -	
CETP	rs183130	TT+	T	+ +	
CETP	rs708272	CT-	A	+ -	

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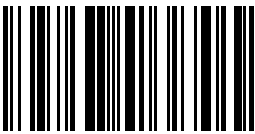
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CETP	rs1532624	TT-	A	- -	
CETP	rs1864163	GG+	A	- -	
CETP	rs2303790	AA+	G	- -	
CETP	rs4783961	AA+	A	- -	
CFB	rs4151667	TT+	A	- -	
CFH	rs800292	CT-	A	+ -	
CFH	rs1061147	CC+	C	- -	
CFH	rs1061170	TT+	T	- -	
CFH	rs1065489	GT+	T	- -	
CFH	rs1329428	AG-	T	- -	
CFH	rs3753394	CT+	T	- -	
COL8A1	rs13081855	GG+	T	- -	
CRYBB3	rs74315490	GG+		- -	
CX3CR1	rs3732378	AG+	A	+ -	
CX3CR1	rs3732379	CT+	T	- -	
DOCK7	rs10889353	AC+	C,T	+ -	
EPHA2	rs3754334	CC-	A	- -	
EPHA2	rs116506614	CC+		- -	
F12	rs1801020	CT-	G	+ -	
F7	rs6046	CT-	A	- -	
FADS1	rs174546	CC+	T	+ +	
FADS1	rs174547	TT+	C	- -	
FADS2	rs174570	CC+	T	- -	
GCKR	rs1260326	CT+	C	+ -	
HTRA1	rs11200638	AG+	A	+ -	
IL-4	rs2243250	CC+	T	- -	
IL-6	rs1800795	CG+	G	+ -	
IL-6	rs2069845	AG+	G	+ -	
INTERGENIC	rs493258	AG-	C	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs10757278	GG+	G	+ +	
ITGB3	rs5918	TT+	C	- -	
LPL	rs285	CT+	T	- -	
LPL	rs320	GT+	G	+ -	

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LPL	rs13702	AG-	A,C	+ -	
LRP8	rs5174	GG-	T	- -	
MMP3	rs3025058	DI+	G	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
MYRF	rs174537	GG+	T	- -	
NOS3	rs1799983	GG+	T	- -	
NOS3	rs1800779	AA+	G	- -	
NOTCH4	rs422951	AG-	C	- -	
OR4A46P	rs7395662	GG+	A	- -	
OXTR	rs2254298	GG+	A	- -	
PCIF1	rs7679	TT+	C	- -	
PITX2	rs6533526	GG+	A	- -	
PPARA	rs1800206	CC+	G	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
RAB11B	rs2967605	GG-	T	- -	
REST	rs1713985	AC-	T	- -	
REST	rs2227902	GG+	T	- -	
SERPINF1	rs1136287	CT+	T	+ -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SKIV2L	rs429608	GG+	A	- -	
SKIV2L	rs2734331	TT-	G	- -	
TLR3	rs3775291	GG-	G,T	+ +	
TLR4	rs4986790	AA+	G,T	- -	
TMEM241	rs9949617	CC+	T	- -	
TNF	rs361525	GG+	A	+ +	
TNF	rs1800629	GG+	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
VEGFA	rs3025039	CC+	T	- -	
ZPR1	rs964184	CC+	C	- -	

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Omega 9

HIGH

Omega 9 or omega 9 (ω -9 fatty acids) are fatty acids, aid in human development, as do omega 3 and omega 6 fatty acids. The name omega 9 means they have a C=C double bond on the ninth carbon from the end opposite the carboxyl. We can find it in vegetable oils. The most important omega 9 acids are: oleic acid - with 18 carbons, erucic acid - with 22 carbons, nervonic acid - with 24 carbons

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ABCG2	rs2231137	GG-	T	+ +	
ABCG2	rs72552713	GG+	A	- -	
ABCG8	rs6544713	CC+	C	- -	
ACE	rs4343	AG+	A	+ -	
ADAMTS12	rs469568	TT-	C	+ +	
ADAMTS12	rs1364044	TT+	A,T	+ +	
ADD1	rs4961	GT+	A,T	+ -	
ADIPOQ	rs17366743	TT+	C	- -	
ADRB2	rs1800888	CC+	T	- -	
APOA5	rs2266788	TT-	A	- -	
APOA5	rs3135506	GG+	C	- -	
APOC1	rs4420638	AA+	G	- -	
APOE	rs7412	TT+	T	+ +	
APOE4	rs429358	TT+	C	- -	
AR	rs5031002	GG+	A	- -	
ATP2B1	rs2681472	CT-	G	- -	
BAG3	rs2234962	CT+	C	- -	
BRAP	rs3782886	AA-	C	- -	
BRCA2	rs4942486	CT+	C	+ -	
BTD	rs104893686	TT+	G	- -	
BTD	rs104893687	CC+	T	- -	
CCL2	rs1024611	CT-	G	+ -	
CDH13	rs8055236	GG+	A,C,T	+ +	
CDKN2B-AS1	rs1011970	GT+	T	- -	
CDKN2B-AS1	rs1063192	TT-	A,T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CDKN2B-AS1	rs10757272	TT+	T	+ +	
CDKN2B-AS1	rs10757274	GG+	G	+ +	

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CETP	rs2303790	AA+	G	- -	
CPS1	rs1047891	CC+	A	- -	
CR1L	rs4844614	GT+	T	+ -	
CYP51A1	rs1041296	TT-	G	- -	
DMD	rs1800278	AA-	C	- -	
DMD	rs1801187	GG-	T	- -	
DNAH11	rs12670798	TT+	C	- -	
DNAJC5B	rs13279522	TT+	C	- -	
DOCK7	rs10889353	AC+	C,T	+ -	
DSG2	rs2230234	AA+	G,T	- -	
F12	rs1801020	CT-	G	+ -	
F5	rs6025	GG-	T	- -	
F5	rs7542281	CT+	T	- -	
F7	rs6046	CT-	A	- -	
FABP2	rs1799883	GG-	A,C,G	- -	
FADS1	rs174547	TT+	C	- -	
FADS2	rs174570	CC+	T	- -	
FMN2	rs17672135	TT+	C	+ +	
GCKR	rs1260326	CT+	C	+ -	
GPX1	rs1050450	CC-	A	- -	
HABP2	rs7080536	GG+	A	- -	
HDAC9	rs2073963	GT+	G	+ -	
IL-4	rs2243250	CC+	T	- -	
IL-6	rs1800795	CG+	G	+ -	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs10757278	GG+	G	+ +	
ITGB3	rs5918	TT+	C	- -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	
KCNE3	rs2270676	CT-	G	- -	
KL	rs9536314	TT+	A,G	- -	
LDLR	rs6511720	GG+	T	- -	
LPL	rs285	CT+	T	- -	

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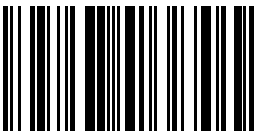
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LPL	rs320	GT+	G	+ -	
LPL	rs13702	AG-	A,C	+ -	
LRP8	rs5174	GG-	T	- -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MMP3	rs3025058	DI+	G	+ -	
MRAS	rs2306374	TT+	C	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MTRR	rs1801394	AA+	G	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NAA25	rs17696736	AA+	G	- -	
NAF1	rs7675998	GG+	G,T	- -	
NINJ2	rs12425791	AG+	A,C	+ -	
NOS3	rs1799983	GG+	T	- -	
NOS3	rs1800779	AA+	G	- -	
NPPA	rs5065	AA+	G	- -	
OR4A46P	rs7395662	GG+	A	- -	
PCIF1	rs7679	TT+	C	- -	
PDE4D	rs966221	CT-	G	- -	
PHACTR1	rs9349379	AA+	A	- -	
PITX2	rs2200733	CT+	T	+ -	
PITX2	rs12646447	CT+	C	+ -	
PLPP3	rs17114036	AA+	G	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
RAB11B	rs2967605	GG-	T	- -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SMAD3	rs17228212	TT+	C	- -	
SPSB4	rs16851055	GG+	A	- -	

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SUPT3H	rs556621	AC-	G	+ -	
THBD	rs1042580	AG-	C	- -	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMEM241	rs9949617	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TNF	rs1800629	GG+	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TRIM29	rs2084898	GG+	A	- -	
TTN	rs2244492	GG-	T	- -	
TXNRD2	rs5748469	AA+	A	- -	
VCAN	rs173686	CT-	G,T	+ -	
WDR12	rs6725887	TT+	C	- -	
ZFHX3	rs7193343	CC+	A,C	- -	
ZPR1	rs964184	CC+	C	- -	

Weight Loss in Diets with Olive Oil

NORMAL

One study detected an interaction between diet and the IL-6 gene (Genotype -174G / C) and SNP rs1800795, in which carriers of smaller homozygous (CC) alleles lost more weight compared to main homozygous (GG) and heterozygous individuals (GC) only in the diet supplemented with virgin olive oil. The authors note that, despite the higher total fat content of the diet supplemented with olive oil compared to the low fat diet, the low fat diet contained a high proportion of Saturated Fatty Acids. Differences in the content of Saturated Fatty Acids, unlike the specific components of olive oil, may therefore be contributing to the differences observed based on the genotype.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
IL-6	rs1800795	CG+	G	+ -	

Arachidonic Acid Deficiency

NORMAL

Arachidonic acid (AA) is an essential fatty acid of the omega-6 family. It plays an important role in muscle building and helps manage body fat thermogenesis. It serves as a regulator of core protein synthesis (muscle growth).

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FADS2	rs174570	CC+	T	- -	
MYRF	rs174537	GG+	T	- -	

General

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Alcohol Intolerance

NORMAL

It can be classified as Aldehyde Dehydrogenase Deficiency (ALDH2). Symptoms: Most visible of all: facial and body redness. In addition to these: Headache, Nausea and vomiting, Tachycardia, May worsen asthma, General malaise. To better illustrate the scenario: the classic hangover symptoms. But instead of showing up the next day, it happens right away.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ALDH2	rs671	GG+	A	- -	

Genetic diseases

Glutathione Synthetase Deficiency

NORMAL

Glutathione synthetase deficiency is a rare autosomal recessive disorder. In clinical terms, glutathione synthetase deficiency can be classified as mild, moderate or severe. Symptoms include hemolytic anemia, metabolic acidosis, 5-oxoprolinuria, progressive neurological symptoms, and recurrent bacterial infections.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GSS	rs28936396	CC-	A	- -	
GSS	rs75863437	GG+	A	- -	
GSS	rs121909307	GG-	T	- -	

Hematologic system

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G6PD deficiency

HIGH

Mutations in G6PD can cause varying degrees of G6PD deficiency, which is a disease that affects red blood cells. For example, a G to A substitution mutation at rs1050828 (also known as G202A) is associated with a reduction in G6PD. The A - G6PD deficient genotype (~8-20% reduction of G6PD) is typically defined by possession of the rs1050828 A allele (rs1050828 (A;A)). In addition, type A-individuals almost always carry the rs1050829 G allele. The frequency of G6PD deficiency is higher in malaria regions, where individuals with G6PD deficiency are typically less affected by malaria infection.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
G6PD	rs762516	CC+			
G6PD	rs1050828	CC+	T		
G6PD	rs1050828	CC+	T		
G6PD	rs1050829	AA-	C		
G6PD	rs1050829	AA-	C		
G6PD	rs2230037	CC-	G		
G6PD	rs5030868	CC-			
G6PD	rs5030869	CC+	A		
G6PD	rs5030872	AA-	T		
G6PD	rs72554664	GG-	A		
G6PD	rs72554665	CC+	G,T		
G6PD	rs76645461	TT-	C		
G6PD	rs76723693	TT-	C		
G6PD	rs78365220	AA+	C,G		
G6PD	rs78478128	GG+	C		
G6PD	rs137852313	GG-			
G6PD	rs137852314	CC+	T		
G6PD	rs137852315	GG-			
G6PD	rs137852316	CC+	T		
G6PD	rs137852317	CC+	T		
G6PD	rs137852318	CC+	A		
G6PD	rs137852319	TT-			
G6PD	rs137852320	AA-			
G6PD	rs137852321	CC+	T		
G6PD	rs137852322	AA+	G		
G6PD	rs137852323	CC+	A,T		
G6PD	rs137852324	CC+	G,T		

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G6PD	rs137852325	CC+	T	- -	
G6PD	rs137852326	GG-		- -	
G6PD	rs137852327	GG-	A	- -	
G6PD	rs137852328	CC+	A	- -	
G6PD	rs137852329	GG+	C	- -	
G6PD	rs137852330	GG+	A	- -	
G6PD	rs137852331	AA-		- -	
G6PD	rs137852332	CC+	G,T	- -	
G6PD	rs137852333	CC-	T	- -	
G6PD	rs137852334	GG+	A	- -	
G6PD	rs137852335	GG-	C	- -	
G6PD	rs137852336	CC+	T	- -	
G6PD	rs137852337	CC+	G,T	+ +	
G6PD	rs137852339	GG-	A	- -	
G6PD	rs137852340	AA-	G	- -	
G6PD	rs137852342	CC-	T	- -	
G6PD	rs137852343	AA+	G	- -	
G6PD	rs137852344	CC-	G	- -	
G6PD	rs137852345	GG+	A	- -	
G6PD	rs137852346	CC+	T	- -	
G6PD	rs137852347	AA+	G	- -	
G6PD	rs137852348	CC-	G	- -	
G6PD	rs137852349	TT-	C	- -	

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High Ferritin



Ferritin dosage is very common in the practice of medical nutrition and sports medicine. This is because, in addition to being an inflammatory marker, it is a key protein in the metabolism of iron in the body, being able to convert Fe²⁺ into Fe³⁺, sequestering large amounts of this metal in the circulation. The sequestered iron is stored inside the protein contained in the tissues and prevents the oxidative damage caused by free iron. Ferritin is an intracellular protein located mainly in the cytoplasm. Small amounts of this protein can be found in plasma. Therefore, it is used in the clinic as a classic marker of iron stores. Orange or red result indicates high ferritin.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BTBD9	rs3923809	AG+	G	+ -	
HFE	rs1799945	GG+	G	+ +	
HFE	rs1800730	AA+	T	- -	
INTERGENIC	rs6077060	CC+	T	- -	
SLC17A1	rs17342717	CC+	T	- -	
TMPRSS6	rs4820268	GG+	A	+ +	
USF2	rs10405246	AA+	G	+ +	

Transferrin



Transferrin is a protein mainly produced by the liver and whose main function is to transport iron to the marrow, spleen, liver and muscles, maintaining the proper functioning of the body. Normal values for transferrin in the blood are: Men: 215 - 365 mg/dL, Women: 250 - 380 mg/dL.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HFE	rs1800562	GG+	A	+ +	
TF	rs1799852	CC+	T	- -	
TF	rs3811647	AG+	G	+ -	

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Anemia

MEDIUM-HIGH

Anemia is defined by the World Health Organization (WHO) as a condition in which the hemoglobin content in the blood is below normal, leading to reduced oxygen transport capacity. Hemoglobin is the substance our body uses to transport oxygen. It is carried in our blood by red blood cells or red blood cells.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BAAT	rs1572983	CC+	T		
BAAT	rs28937579	AA-	C		
CDAN1	rs120074167	CC-	A		
ERCC4	rs1799801	CC+	C		
ERCC4	rs1800067	AG+	A		
FANCM	rs144567652	CC+	A,T		
G6PD	rs1050828	CC+	T		
SLC11A2	rs121918367	GG-	A,T		
TERT	rs2736098	AG-	T		
TF	rs1049296	CT+	T		
TF	rs1799852	CC+	T		
TMPRSS6	rs855791	TT-	G,T		
TMPRSS6	rs4820268	GG+	A		



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Triglycerides

MEDIUM-HIGH

Tendency to higher serum triglyceride levels. Triglycerides are fats from the food we eat that are carried in the blood. Most of the fats we eat, including butter, margarines, and oils, are in triglyceride form. Excess calories, alcohol or sugar in the body turn into triglycerides and are stored in fat cells throughout the body.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCG8	rs6756629	GG+	T		
APOA5	rs662799	AA+	T		
APOA5	rs2266788	TT-	A		
APOA5	rs3135506	GG+	C		
APOB	rs693	CT-	A		
APOE	rs7412	TT+	T		
BUD13	rs28927680	GG-	G		
CILP2	rs16996148	GT+	T		
DOCK7	rs10889353	AC+	C,T		
FADS1	rs174547	TT+	C		
FADS2	rs174570	CC+	T		
FTO	rs17817449	TT+	A,G		
GCKR	rs780094	AG-	C		
GCKR	rs1260326	CT+	C		
HMGCR	rs3846663	CT+	T		
INTERGENIC	rs12130333	CT+	C		
LDLR	rs6511720	GG+	T		
LEPR	rs1805134	TT+	C		
LIPC	rs1800588	CC+	T		
LPL	rs285	CT+	T		
LPL	rs320	GT+	G		
LPL	rs13702	AG-	A,C		
LYPLAL1	rs2605100	GG+	G		
OR4A46P	rs7395662	GG+	A		
PCIF1	rs7679	TT+	C		
PPARG	rs1801282	CG+	C		
RAB11B	rs2967605	GG-	T		
SUGP1	rs10401969	CT+	C		
TBL2	rs17145738	CC+	T		

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TMEM241	rs9949617	CC+	T	- -	
TRIB1	rs2954029	AT+	T	+ -	
XKR6	rs7819412	AG+	A,T	+ -	
ZPR1	rs964184	CC+	C	- -	



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HDL (Cholesterol)

 MEDIUM-HIGH

Good cholesterol, also known as HDL cholesterol, is a type of cholesterol that is important for the proper functioning of the body, as it acts in the process of eliminating fats from the body, helping to prevent heart disease. However, for this, it is important that the cholesterol levels in both men and women are above 40 mg/dL and that LDL levels, which is bad cholesterol, be less than 130 mg/dL.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs4149268	AG-	A,C		
ABCG8	rs6756629	GG+	T		
APOA4	rs675	TT+	C		
BUD13	rs28927680	GG-	G		
CETP	rs5882	AG+	A		
CETP	rs183130	TT+	T		
CETP	rs708272	CT-	A		
CETP	rs1864163	GG+	A		
CETP	rs4329913	GG-	T		
CETP	rs4783961	AA+	A		
EDN1	rs5370	GT+	T		
FADS2	rs174570	CC+	T		
FTO	rs1558902	TT+	A		
HNF4A	rs1800961	CC+	T		
IL-6	rs1800795	CG+	G		
INTERGENIC	rs3764261	TT-	A		
INTERGENIC	rs10468017	CC+	T		
INTERGENIC	rs12678919	AA+	G		
LDLR	rs6511720	GG+	T		
LIPC	rs261332	GG+	G		
LIPC	rs1800588	CC+	T		
LIPG	rs4939883	CT+	C		
LPL	rs285	CT+	T		
LPL	rs320	GT+	G		
LTA	rs1799724	CT+	T		
NUTF2	rs2271293	AG+	A		
PCIF1	rs7679	TT+	C		
PPARD	rs2016520	AA-	T		

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PPARD	rs3734254	TT+	T	+ +	
SCARB1	rs5888	CT-	C	+ -	
TTC39B	rs471364	AA-	C	- -	
ZPR1	rs964184	CC+	C	- -	

Lower LDL in low unsaturated fat diets

NORMAL

Associated with reduced LDL cholesterol levels in individuals on a LOW / POOR diet in unsaturated fats, such as those with a more right-hand indication.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FADS1	rs174547	TT+	C	- -	

Low Ferritin in Women

NORMAL

Ferritin is a globular protein that is primarily located in the liver. Ferritin is the most important iron storage protein and is found in all cells, especially those involved in the synthesis of ferric compounds and in the metabolism and storage of iron.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HFE	rs1799945	GG+	G	- -	
TMPRSS6	rs4820268	GG+	A	- -	

Hypoproteinemia

UNDEFINED

Hypoproteinemia is the result of several factors that ultimately result in a considerable drop in the amount of blood protein in both whole blood and blood plasma. Hypoproteinemia occurs due to severely limited protein intake in a regular nutritional diet. An example of nutritional factor hypoproteinemia is Kwashiorkor, a type of protein-energy malnutrition that affects young children; Malabsorption; Liver disease can also cause hypoproteinemia, decreasing the synthesis of plasma proteins such as albumin; Kidney diseases such as nephrotic syndrome can also result in hypoproteinemia because plasma proteins are lost in the urine.

L-ferritin deficiency

UNDEFINED

L-ferritin deficiency: A condition characterized by low levels of ferritin in serum and tissues in the absence of other hematological symptoms. Seizures and mild neuropsychologic impairment may manifest in individuals with complete ferritin deficiency. Clinical signs and symptoms include generalized seizures, atypical restless leg syndrome, mild neuropsychologic impairment, and progressive hair loss.

Hormone



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Reduction of Thyroid Hormonal Metabolism

MEDIUM

Thyroid hormones stimulate nearly every aspect of carbohydrate metabolism, including rapid glucose uptake by cells, greater absorption by the gastrointestinal system, and increased insulin secretion (thus influencing whether or not diabetes occurs). The increase in thyroid hormone decreases the amount of cholesterol and triglycerides in the blood. Conversely, decreased thyroid secretion greatly increases blood cholesterol and triglyceride concentrations, often causing an excessive deposition of fat in the liver. The large increase in blood cholesterol in prolonged (ie, untreated) hypothyroidism is often associated with the onset of arteriosclerosis.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DIO1	rs2235544	AC+	A,T	+ -	
DIO1	rs11206244	CC+	T	- -	

Hormones

Cortisol Level

MEDIUM

Research shows a clear relationship between obesity, increased cortisol (stress hormone) and depression. The incidence of depression is quite high, but it often manifests itself in an unconventional way, making diagnosis difficult, especially in women. It can appear in the form of binge eating or obesity and not through the common, which is loss of appetite and weight loss. Or through insomnia and fibromyalgia (with pain throughout the body), or migraine, among other examples. You still don't know which came first. Whether depression elevates cortisol or cortisol is elevated in depression. The hypothalamus, the pituitary gland (the body's mother gland), both located "in the brain", are responsible for the production of cortisol through the adrenal gland. In the face of everyday stress situations, these glands constitute the hypothalamic-pituitary-adrenal axis, responsible for a healthy response to stress or for the formation of the unhealthy "cascade" of stress-depression-obesity. Although cortisol is a beneficial hormone, it can be produced beyond conventional needs causing us to get sick. Thus, excess cortisol would routinely be able to produce negative effects similar to the side effects of corticosteroid medications, those routinely used for arthritis and asthma, causing what we call Cushing's Syndrome, in which full moon faces predominate " (chubby and rounded, associated with abdominal fat). For the treatment of this hormonal change, specific antidepressants (related to the neurotransmitter serotonin) seem to positively increase the expression (action) of cortisol in the brain, which would then be beneficial, as it would reduce the excitation of this axis and also the production of cortisol by the supra gland - renal relieving cardiac risk.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DGKH	rs1170109	GT+	T	+ -	
FKBP5	rs1360780	CC+	A,C	- -	
HSD11B1	rs846910	AG+	A	+ -	
HTR2C	rs6318	GG+	G,T	- -	
OXTR	rs53576	AA+	A	+ +	

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Aromatase Deficiency

MEDIUM

Aromatase deficiency is a rare condition that develops in the uterus and typically becomes evident only at puberty. Girls affected by this deficiency may not develop normal female sexual characteristics. Boys tend to have normal or near-normal sexual characteristics, but they are abnormally tall and are at risk for osteoporosis. Aromatase is a type of human enzyme, which is a protein that speeds up chemical processes. This enzyme converts male hormones from androgen to female estrogen within the body of individuals of both sexes. Aromatase inhibitors are commonly used to slow the expansion of breast cancer cells in women.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CYP19A1	rs4646	AC+	C	+ -	
CYP19A1	rs10046	CC-	A	- -	
CYP19A1	rs700518	AA-	C	- -	
CYP19A1	rs700519	CT-	A	+ -	
CYP19A1	rs2236722	TT-	G	- -	
CYP19A1	rs28757184	CC-	A,T	- -	
CYP19A1	rs121434534	CC-	A	- -	
CYP19A1	rs121434536	CC-	A	- -	

Increased Cortisol (in women)

UNDEFINED

Cortisol is a hormone produced by the adrenal glands, which are located above the kidneys. Cortisol's function is to help the body manage stress, reduce inflammation, help the immune system function, and keep blood sugar levels constant, as well as blood pressure. Blood cortisol levels vary during the day because they are related to daily activity and serotonin, which is responsible for the sensation of pleasure and well-being. Thus, basal blood cortisol levels are generally higher in the morning upon awakening, from 8.7 to 22 µg/dL, and then decrease throughout the day to values less than 10 µg/dL, whereas in people that work at night the levels are reversed. High cortisol in the blood can cause symptoms such as loss of muscle mass, weight gain or decreased testosterone or be indicative of problems such as Cushing's Syndrome, for example. Low cortisol can cause symptoms of depression, tiredness or weakness or be indicative of problems, such as Addison's Disease, for example.

Immune system

HLA-DQ8

HIGH

HLA-DQ8 is a human leukocyte antigen serotype within the HLA-DQ serotype group. DQ8 is commonly linked to autoimmune diseases in the human population. DQ8 is the second most prevalent isoform linked to celiac disease and the DQ most associated with type 1 diabetes. DQ8 increases the risk of rheumatoid arthritis. Results rs7454108 (GG) and (GA) indicate a significant association between the DQ8 variant and Celiac Disease.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HLA-DQB1	rs7454108	CC+	C	+ +	

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HLA-DQ2.5

HIGH

HLA genes represent the main risk factor in autoimmune diseases. In celiac disease (CD), the vast majority of patients carry the HLA DQA1 * 05 and DQB1 * 02 alleles, both encoding the DQ2.5 molecule. It is widely accepted that DQ2.5 genes establish different intensities of anti-gluten immunity depending on whether they are in a homozygous or heterozygous configuration. Results rs2187668 (TT); rs4988889 (TT) and rs2858331 (TT) are related to Celiac Disease.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HLA	rs2858331	TT-	G		
HLA-DQA1	rs2187668	GG-	A,G,T		

HLA-DQ4

HIGH

HLA-DQ4 (DQ4) is a subgroup of serotypes within the HLA-DQ (DQ) serotypes. Serotype is determined by antibody recognition of the β 4 subset of β -DQ chains. The DQ β chain is encoded by the HLA-DQB1 locus and the DQ4 is encoded by the HLA-DQB1 * 04 allele group. Currently, this group contains 2 common alleles, DQB1 * 0401 and DQB1 * 0402. HLA-DQ4 and HLA- DQB1*04 are almost synonymous in meaning. β -chain DQ4 combine with α -chains, encoded by the genetically linked HLA-DQA1 alleles, to form the cis-haplotype isoforms. These isoforms, called DQ4.3 and DQ4.4, are also encoded by genes DQA1*0303 and DQA1*0401 , respectively. Disease Relationship: DQ4 is associated with juvenile diabetic retinopathy. The DR8-DQ4 haplotype is associated with papillary thyroid carcinomas, juvenile idiopathic arthritis via the DR8 allele, chronic chlamydia infection. DR4-DQ4 (DRB1 * 0405: DQB1 * 0401) is associated with autoimmune pancreatitis, type 1 juvenile diabetes, rheumatoid arthritis. The DQA1 * 0303: DQB1 * 04 haplotype is associated with Crohn's Disease in some populations.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HLA	rs4713586	TT-	G		
HLA-DQB1	rs7775228	TT+	C		
HLA-DRA	rs2395182	TT+	T		

HLA-DQ7

UNDEFINED

Celiac disease has a strong genetic component mainly due to the genes encoding HLA DQ2/DQ8. However, a minority of patients with CD are DQ2/DQ8-negative. Research has identified that DQ7 represents an additive or independent Celiac Disease risk haplotype with respect to the DQ2 / DQ8 haplotypes. Result: rs4639334 (A) is associated with HLA-DQ7 and is related to Celiac Disease.

Metabolic

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Obesity

HIGH

Here, we evaluated a set of genes whose polymorphisms were associated with a higher risk of developing obesity. Result in orange or red indicates a greater tendency to obesity.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C		
ADCYAP1	rs1893154	CC-	G		
ADIPOQ	rs1501299	CC-	A		
ADIPOQ	rs17300539	GG+	A		
ADRB2	rs1042714	GT+	C,T		
ADRB3	rs4994	TT-	G		
ADSS	rs3102460	CT+	T		
AGRP	rs5030980	GG-	T		
AKT1	rs1130214	GT-	C		
ANKAR	rs12053254	TT+	C		
ANKK1	rs1800497	CT-	A		
APOA2	rs5082	TT-	A		
APOA4	rs675	TT+	C		
APOA5	rs662799	AA+	T		
APOB	rs5742904	GG-	A,T		
APOE	rs7412	TT+	T		
ARMC4	rs587777047	AA+	C		
ARMC4	rs587777049	GG+	T		
BDNF	rs925946	GT+	G		
BDNF	rs988712	GG+	G		
BDNF	rs4923461	AA+	C,G		
BDNF	rs10501087	TT+	C		
BICC1	rs11006263	AA+	G		
C2CD4C	rs12978500	AC+	A		
C8ORF34	rs1517114	CC+	A,G,T		
CCDC77	rs1048466	AG+	A,C		
CCK	rs9311317	TT-	G		
CD46	rs35366573	CC+	T		
CDCA3	rs5443	CT+	T		
CDHR3	rs6967330	GG+	A		

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CLOCK	rs1801260	AA+	C,G,T	- -	
COL4A1	rs3742207	AC-	A,G	- -	
CYP2E1	rs2031920	CC+	T	- -	
CYP2E1	rs2070672	AA+	G	- -	
CYP2E1	rs72559710	GG+	A,C,T	- -	
DAPL1	rs16843372	TT+	C	- -	
DOCK8	rs6476030	AA+	G	- -	
DOCK8	rs192864327	GG+	C,T	- -	
ECT2	rs7646507	AG+	A	- -	
EEPD1	rs4302748	AG+	A	- -	
EHF	rs286913	CC-	G,T	- -	
EVA1A	rs17011455	TT+	C	- -	
FABP2	rs1799883	GG-	A,C,G	- -	
FAM209B	rs6024938	CT+	T	- -	
FARP1	rs688872	TT-	G	- -	
FLJ33534	rs16857178	GG+	A	- -	
FSIP1	rs10152640	AG+	G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs1421085	TT+	C	- -	
FTO	rs1558902	TT+	A	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs8050136	CC+	A	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs9939609	TT+	A	- -	
FTO	rs11642841	CC+	A	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GHRL	rs35680	AA-	C	- -	
GHRL	rs4684677	TT+	T	- -	
GHRL	rs34911341	CC+	T	- -	
GHSR	rs509035	AG+	A	+ -	
GHSR	rs572169	AG-	T	+ -	
GHSR	rs2232165	CC-	A	- -	
GHSR	rs2948694	AG+	G	+ -	
GPC5	rs2352028	CT+	G,T	+ -	

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GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
IL-1RN	rs419598	TT+	C	- -	
IL-6	rs1800795	CG+	G	- -	
IL-6	rs1800797	AG+	G	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2051457	GG+	T	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs7647305	CT+	C	+ -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KCNMA1	rs2116830	CC-	C	+ +	
KIF6	rs9380880	GG+	A	- -	
LEPR	rs1137101	AA+	G	- -	
LEPR	rs1805094	CG+	C	+ -	
LEPR	rs1805134	TT+	C	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPP	rs1152846	AG-	C	+ -	
MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	
MC4R	rs17782313	CT+	C	+ -	
MC4R	rs52820871	TT+	G	- -	
MDFIC	rs7784447	GG+	A	- -	

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MSRA	rs545854	CG-	G	+ -	
NAT2	rs1208	GG+	G	- -	
NAT2	rs1041983	CC+	T	- -	
NAT2	rs1799929	CT+	T	+ -	
NAT2	rs1801279	GG+	A	- -	
NAT2	rs1801280	CC+	C	- -	
NAT2	rs1805158	CC+	A,T	- -	
NDUFA8	rs3818638	AG-	C	- -	
NFE2L2	rs6721961	GG+	C,G	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	
NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PFKP	rs6602024	GG+	A	- -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
PLIN1	rs894160	GG-	T	- -	
POC5	rs2112347	GT+	G	- -	
POC5	rs2307111	AG-	T	+ -	
PPARG	rs1801282	CG+	C	+ -	
PPARG	rs3856806	CC+	T	- -	
PPARGC1A	rs8192678	GG-	T	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SLC22A2	rs316019	GG-	C	- -	
SLC22A2	rs8177504	CC-	A,T	- -	
SLC22A2	rs8177507	GG-	G,T	- -	

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SLC22A2	rs8177516	CC-	A,T	- -	
SLC22A2	rs8177517	AA-	C,G	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	
SMYD3	rs11800820	CC+	A,T	- -	
SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STON2	rs6574644	AA+	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TCF7L2	rs7903146	CC+	G,T	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UCP1	rs1800592	AG-	C	- -	
UCP2	rs659366	CT+	T	+ -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	
VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

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Lipid Metabolism

HIGH

Speed that the body carries out the metabolism of fats. In orange or red indicates slower metabolism, negative characteristic.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C		
ACE	rs4343	AG+	A		
ADCYAP1	rs1893154	CC-	G		
ADRB3	rs4994	TT-	G		
ADSS	rs3102460	CT+	T		
ANKAR	rs12053254	TT+	C		
ANKK1	rs1800497	CT-	A		
APOA5	rs662799	AA+	T		
APOA5	rs3135506	GG+	C		
ARMC4	rs587777047	AA+	C		
ARMC4	rs587777049	GG+	T		
BICC1	rs11006263	AA+	G		
C2CD4C	rs12978500	AC+	A		
C8ORF34	rs1517114	CC+	A,G,T		
CCDC77	rs1048466	AG+	A,C		
CD46	rs35366573	CC+	T		
CDCA3	rs5443	CT+	T		
CDHR3	rs6967330	GG+	A		
COL4A1	rs3742207	AC-	A,G		
CYP2E1	rs2031920	CC+	T		
CYP2E1	rs2070672	AA+	G		
CYP2E1	rs72559710	GG+	A,C,T		
DAPL1	rs16843372	TT+	C		
DOCK8	rs192864327	GG+	C,T		
ECT2	rs7646507	AG+	A		
EEPD1	rs4302748	AG+	A		
EHF	rs286913	CC-	G,T		
EVA1A	rs17011455	TT+	C		
FAM209B	rs6024938	CT+	T		
FAM71F1	rs6971091	GG+	A		

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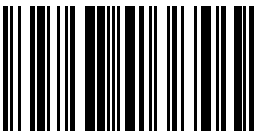
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FARP1	rs688872	TT-	G	- -	
FLJ33534	rs16857178	GG+	A	- -	
FSIP1	rs10152640	AG+	G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs1421085	TT+	C	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs9939609	TT+	A	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GPC5	rs2352028	CT+	G,T	+ -	
GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KIF6	rs9380880	GG+	A	- -	
LEPR	rs1137101	AA+	G	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPP	rs1152846	AG-	C	+ -	
MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	

Name

Sample

Age

Gender

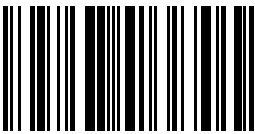
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Prescriber

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Sample

MDFIC	rs7784447	GG+	A	- -	
NAT2	rs1208	GG+	G	- -	
NAT2	rs1041983	CC+	T	- -	
NAT2	rs1799929	CT+	T	+ -	
NAT2	rs1801279	GG+	A	- -	
NAT2	rs1801280	CC+	C	- -	
NAT2	rs1805158	CC+	A,T	- -	
NDUFA8	rs3818638	AG-	C	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	
NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PFKP	rs6602024	GG+	A	- -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
PLIN1	rs894160	GG-	T	- -	
POC5	rs2112347	GT+	G	- -	
PON1	rs662	AG-	C	+ -	
PPARG	rs1801282	CG+	C	+ -	
PPARG	rs3856806	CC+	T	- -	
PPARGC1A	rs8192678	GG-	T	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SLC22A2	rs316019	GG-	C	- -	
SLC22A2	rs8177504	CC-	A,T	- -	
SLC22A2	rs8177507	GG-	G,T	- -	
SLC22A2	rs8177516	CC-	A,T	- -	

Name

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Gender

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SLC22A2	rs8177517	AA-	C,G	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	
SMYD3	rs11800820	CC+	A,T	- -	
SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STON2	rs6574644	AA+	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs613872	TT+	T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	
VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

Gluten Intolerance

HIGH

Non-celiac gluten intolerance is the inability or difficulty in digesting gluten, which is a protein found in wheat, rye and barley. In these people, gluten damages the walls of the small intestine, causing diarrhea, pain and abdominal swelling, in addition to making nutrient absorption difficult. In celiac disease, gluten intolerance also occurs, but there is a reaction of the immune system causing a more serious condition, with inflammation, intense pain and frequent diarrhea.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HLA-DQB1	rs7775228	TT+	C	- -	
IL-18RAP	rs917997	AG-	A,C	+ -	
KIAA1109	rs6822844	GT+	T	+ -	
KIAA1109	rs13119723	GG+	G	+ +	

Name

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Gender

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Celiac disease

HIGH

Immune reaction to ingestion of gluten, a protein found in wheat, barley and rye. Celiac disease is strongly influenced by genetics, depending on a part of the DNA sequence called the HLA locus (human leukocyte antigen). There are many HLA sequence variants, but only two sequence variants called DQ2.5 (T allele in rs2187668) and DQ8 (C allele in rs7454108) can form inflammatory complexes with gliadin peptides. About 90% of celiac patients carry the DQ2.5 variant, and the remaining 10% produce the DQ8 variant. If you don't carry either of these two variants, it is virtually impossible to develop celiac disease.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABL2	rs2816216	TT-	G		
ATXN2	rs653178	AA-	C,T		
CCR3	rs6441961	CC+	C		
CTLA4	rs231775	AG+	G		
HLA	rs4713586	TT-	G		
HLA-DPA1	rs2301226	GG+	A		
HLA-DQA1	rs2187668	GG-	A,G,T		
HLA-DQB1	rs7454108	CC+	C		
HLA-DQB1	rs7775228	TT+	C		
HLA-DRA	rs2395182	TT+	T		
IL-18RAP	rs917997	AG-	A,C		
KIAA1109	rs6822844	GT+	T		
KIAA1109	rs13119723	GG+	G		
LPP	rs1464510	GT-	A,T		
MYO9B	rs2305764	TT-	A		
RGS1	rs2816316	TT-	A		
SH2B3	rs3184504	CC+	A,C,G		
TAGAP	rs1738074	AA-	C		

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Trend of Overeating (Gluttony)

HIGH

Usually associated with anxiety or emotional events, orange or red indicates greater propensity.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C		
ADCYAP1	rs1893154	CC-	G		
ADRB3	rs4994	TT-	G		
ADSS	rs3102460	CT+	T		
ANKAR	rs12053254	TT+	C		
ANKK1	rs1800497	CT-	A		
ARMC4	rs587777047	AA+	C		
ARMC4	rs587777049	GG+	T		
BICC1	rs11006263	AA+	G		
C2CD4C	rs12978500	AC+	A		
C8ORF34	rs1517114	CC+	A,G,T		
CCDC77	rs1048466	AG+	A,C		
CD46	rs35366573	CC+	T		
CDCA3	rs5443	CT+	T		
CDHR3	rs6967330	GG+	A		
COL4A1	rs3742207	AC-	A,G		
CYP2E1	rs2031920	CC+	T		
CYP2E1	rs2070672	AA+	G		
CYP2E1	rs72559710	GG+	A,C,T		
DAPL1	rs16843372	TT+	C		
DOCK8	rs192864327	GG+	C,T		
ECT2	rs7646507	AG+	A		
EEPD1	rs4302748	AG+	A		
EHF	rs286913	CC-	G,T		
EVA1A	rs17011455	TT+	C		
FAM209B	rs6024938	CT+	T		
FAM71F1	rs6971091	GG+	A		
FARP1	rs688872	TT-	G		
FLJ33534	rs16857178	GG+	A		
FSIP1	rs10152640	AG+	G		
FTO	rs1121980	CC-	A		

Name

Sample

Age

Gender

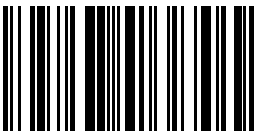
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Sample

FTO	rs1421085	TT+	C	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs9939609	TT+	A	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GHSR	rs572169	AG-	T	- -	
GPC5	rs2352028	CT+	G,T	+ -	
GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KIF6	rs9380880	GG+	A	- -	
LEPR	rs1137101	AA+	G	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPP	rs1152846	AG-	C	+ -	
MAOA	rs909525	GG-	T	+ +	
MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	
MDFIC	rs7784447	GG+	A	- -	
NAT2	rs1208	GG+	G	- -	

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NAT2	rs1041983	CC+	T	- -	
NAT2	rs1799929	CT+	T	+ -	
NAT2	rs1801279	GG+	A	- -	
NAT2	rs1801280	CC+	C	- -	
NAT2	rs1805158	CC+	A,T	- -	
NDUFA8	rs3818638	AG-	C	- -	
NGF	rs6330	CC-	A	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	
NMB	rs1051168	GT+	C,T	+ -	
NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PFKP	rs6602024	GG+	A	- -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
POC5	rs2112347	GT+	G	- -	
PPARG	rs3856806	CC+	T	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SLC22A2	rs316019	GG-	C	- -	
SLC22A2	rs8177504	CC-	A,T	- -	
SLC22A2	rs8177507	GG-	G,T	- -	
SLC22A2	rs8177516	CC-	A,T	- -	
SLC22A2	rs8177517	AA-	C,G	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	
SMYD3	rs11800820	CC+	A,T	- -	

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SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STON2	rs6574644	AA+	A	- -	
TAS2R38	rs1726866	TT-	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs613872	TT+	T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TPH2	rs4565946	CT+	A,G,T	- -	
TPH2	rs4570625	GT+	G	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	
VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

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Weight Gain Trend

MEDIUM-HIGH

Usually be linked to genetics or improper diet.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C		
ADCYAP1	rs1893154	CC-	G		
ADIPOQ	rs266729	CC+	A,G,T		
ADIPOQ	rs17300539	GG+	A		
ADIPOQ	rs121917815	CC+	T		
ADRB2	rs1042714	GT+	C,T		
ADRB3	rs4994	TT-	G		
ADSS	rs3102460	CT+	T		
ANKAR	rs12053254	TT+	C		
ANKK1	rs1800497	CT-	A		
ARMC4	rs587777047	AA+	C		
ARMC4	rs587777049	GG+	T		
BICC1	rs11006263	AA+	G		
C2CD4C	rs12978500	AC+	A		
C8ORF34	rs1517114	CC+	A,G,T		
CCDC77	rs1048466	AG+	A,C		
CD46	rs35366573	CC+	T		
CDCA3	rs5443	CT+	T		
CDHR3	rs6967330	GG+	A		
COL4A1	rs3742207	AC-	A,G		
CYP2E1	rs2031920	CC+	T		
CYP2E1	rs2070672	AA+	G		
CYP2E1	rs72559710	GG+	A,C,T		
DAPL1	rs16843372	TT+	C		
DOCK8	rs192864327	GG+	C,T		
ECT2	rs7646507	AG+	A		
EEPD1	rs4302748	AG+	A		
EHF	rs286913	CC-	G,T		
ETV5	rs1516725	CT+	C		
EVA1A	rs17011455	TT+	C		
FAM209B	rs6024938	CT+	T		

Name

Sample

Age

Gender

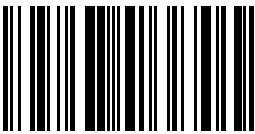
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FAM71F1	rs6971091	GG+	A	- -	
FARP1	rs688872	TT-	G	- -	
FLJ33534	rs16857178	GG+	A	- -	
FSIP1	rs10152640	AG+	G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs1421085	TT+	C	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs9939609	TT+	A	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GPC5	rs2352028	CT+	G,T	+ -	
GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KIF6	rs9380880	GG+	A	- -	
LEP	rs10244329	TT+	T	- -	
LEPR	rs1137101	AA+	G	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPP	rs1152846	AG-	C	+ -	

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MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	
MC4R	rs17782313	CT+	C	+ -	
MDFIC	rs7784447	GG+	A	- -	
MTCH2	rs10838738	AG+	G	+ -	
NAT2	rs1208	GG+	G	- -	
NAT2	rs1041983	CC+	T	- -	
NAT2	rs1799929	CT+	T	+ -	
NAT2	rs1801279	GG+	A	- -	
NAT2	rs1801280	CC+	C	- -	
NAT2	rs1805158	CC+	A,T	- -	
NDUFA8	rs3818638	AG-	C	- -	
NEGR1	rs12141391	CC+	A	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	
NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PFKP	rs6602024	GG+	A	- -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
POC5	rs2112347	GT+	G	- -	
PPARG	rs3856806	CC+	T	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SEC16B	rs10913469	TT+	C	- -	
SH2B1	rs7498665	AG+	G,T	+ -	
SLC22A2	rs316019	GG-	C	- -	

Name

Sample

Age

Gender

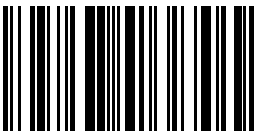
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SLC22A2	rs8177504	CC-	A,T	- -	
SLC22A2	rs8177507	GG-	G,T	- -	
SLC22A2	rs8177516	CC-	A,T	- -	
SLC22A2	rs8177517	AA-	C,G	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	
SMYD3	rs11800820	CC+	A,T	- -	
SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STON2	rs6574644	AA+	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs613872	TT+	T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs1320333	GG-	T	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UCP2	rs660339	CT-	T	+ -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	
VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

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Trend to regain weight

MEDIUM-HIGH

Indication in orange or red indicates it is easier to regain weight after losing weight.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADIPOQ	rs17300539	GG+	A		
ADRB2	rs1042713	GG+	A		
BDNF	rs6265	GG-	T		
FTO	rs3751812	GG+	T		
FTO	rs16945088	AA+	G		
INTERGENIC	rs2815752	TT-	A		
LEP	rs2071045	TT+	C		
LEP	rs4731426	GG+	A,C,T		

Greater Insulin Sensitivity with Physical Exercise

MEDIUM-HIGH

Result in orange or red indicates having greater insulin sensitivity when playing physical sports.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
LIPC	rs1800588	CC+	T		

Caffeine Metabolization

MEDIUM

Analysis of a set of genes involved in caffeine metabolism. Indicates whether this metabolism is more or less efficient. Indication in orange or red indicates faster metabolism, and thus, less effect, with smaller doses of it. Results in red is beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADORA2A	rs2298383	CT+	C		
AHR	rs6968865	AT+	T		
CYP1A1	rs2470893	GG-	T		
CYP1A1	rs2472297	CC+	T		
CYP1A2	rs762551	AC+	C		
RYR1	rs186983396	CC+	T		

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Carbohydrate Metabolism

MEDIUM

Carbohydrates have a centralizing monomer which is glucose. From glucose, carbohydrates can be stored in the form of glycogen. When the body needs energy, the glycolytic pathway is activated, where glucose is converted to pyruvate.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AGER	rs184003	GG-	A	- -	
TCF7L2	rs290481	CT+	T	+ -	
TCF7L2	rs12255372	GG+	T	- -	

Trend of Eating Sweets

MEDIUM

Greater tendency to eat sweets.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A	+ -	
FGF21	rs838133	CT-	A	+ -	
FTO	rs11642841	CC+	A	- -	
GHRL	rs35680	AA-	C	- -	
GHRL	rs4684677	TT+	T	- -	
GHRL	rs34911341	CC+	T	- -	
GHSR	rs509035	AG+	A	+ -	
GHSR	rs572169	AG-	T	+ -	
GHSR	rs2232165	CC-	A	- -	
GHSR	rs2948694	AG+	G	+ -	

Micronutrient Metabolism

MEDIUM

Speed that the body carries out the metabolism of multiple micronutrients. Note that results indicate that the individual has a better micronutrient metabolism.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DLAT	rs2303436	AG-	T	+ -	
ENO3	rs238238	AG+	G	+ -	
MTNR1B	rs10830963	CC+	G	- -	
PCK1	rs8192708	AG+	G	+ -	
SLC2A9	rs3733591	GG-	T	- -	

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Leptin receptor polymorphism

NORMAL

Leptin can increase energy expenditure through sympathetic nerve stimulation. The tissue action of leptin is through its binding with its receptor.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
LEPR	rs1137101	AA+	G	- -	

Serum Ascorbate Levels

NORMAL

Maintaining adequate levels of vitamin C (ascorbic acid) in the body is essential for the biosynthesis of collagen, catecholamine and carnitine; absorption of non-heme iron; Antioxidant protection and therefore plays a critical role in normal body functioning and optimal health. A number of factors, both endogenous and exogenous, contribute to the body status of vitamin C, including vitamin C transporters that regulate vitamin bioavailability and plasma and tissue concentrations; enzymatic reactions in which vitamin C is consumed by reducing redox-active metallic cofactors; and a range of environmental factors and endogenous stresses, such as oxidative stress, infection and inflammation.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
SLC23A1	rs10063949	CT+	C	+ -	
SLC23A1	rs33972313	GG-	A,G,T	- -	

Protein Metabolization

LOW

Proteins degraded in the digestive process result in amino acids, which are absorbed by the epithelial cells of the small intestine, transported to the bloodstream and distributed to different tissues. Amino acids are fundamental in protein synthesis and are precursors of all non-protein nitrogenous compounds, such as the nitrogenous bases of nucleotides, and amines and their derivatives, such as histamine and adrenaline. It is estimated that in a healthy adult human being there is a turnover of approximately 400g of protein per day. About 300g can be reused, while the remaining 100g are discarded. Living beings are not able to store stores of amino acids or proteins and, therefore, daily protein intake is necessary. The rise in the plasma level of amino acids, as well as glucose, stimulates the β cells of the endocrine pancreas to secrete insulin. This hormone stimulates the uptake of amino acids by muscle and liver, in addition to activating the enzymatic apparatus responsible for protein synthesis.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FTO	rs9939609	TT+	A	- -	

Metabolic disorders

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Fructosemia

HIGH

Fructosemia is a rare autosomal recessive genetic metabolic disorder, caused by mutations in the ALDOB (9q22. 3) gene, encoding the enzyme aldolase B. This case shows that fructosemia typically causes hypoglycemia. This disorder should be included in differential diagnosis.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ALDOB	rs1800546	CC+	C	- -	
ALDOB	rs76917243	GG+	A	- -	
ALDOB	rs78340951	GG+	G	+ +	
ALDOB	rs146360505	CC-	A	- -	
FBP1	rs121918188	GG-	T	- -	

Low Ferritin

MEDIUM-HIGH

Ferritin is a globular protein that is primarily located in the liver. Ferritin is the most important iron storage protein and is found in all cells, especially those involved in the synthesis of ferric compounds and in the metabolism and storage of iron. Orange or red result indicates lower ferritin levels.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BTBD9	rs3923809	AG+	G	+ -	
BTBD9	rs9296249	CT+	T	+ -	
HFE	rs1800562	GG+	A	+ +	

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Galactosemia

NORMAL

Life-threatening metabolic disease beginning in the neonatal period. Babies often develop feeding difficulties, lethargy, and severe liver disease. Epidemiology The global prevalence is unknown, but the estimated annual incidence is 1/40,000 to 1/60,000 in Western countries. The disorder appears to be more common in the Caucasian population than in other ethnic groups, but numbers in other populations may be underestimated. Males and females are equally affected. Clinical description When ingesting breast milk or lactose-containing formula, babies develop feeding problems, failure to thrive and signs of liver damage (jaundice, tendency to bleed, hypoglycaemia). In the absence of adequate treatment (galactose restriction), sepsis (E-coli) and neonatal death can occur. Despite adequate treatment, long-term complications appear, including cognitive impairment, motor deficits, ovarian dysfunction with reduced fertility in women and reduced bone density. Male fertility has not been fully studied.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GALT	rs2070074	AA+	G		
GALT	rs2070075	CC+	G,T		
GALT	rs111033634	CC+	T		
GALT	rs111033640	II+			
GALT	rs111033645	CC+	T		
GALT	rs111033652	CC+	T		
GALT	rs111033656	CC+	A		
GALT	rs111033658	CC+	T		
GALT	rs111033661	AA+	G		
GALT	rs111033665	GG+	A		
GALT	rs111033666	TT+	C		
GALT	rs111033667	AA+	C		
GALT	rs111033669	AA+	G		
GALT	rs111033670	GG+	A		
GALT	rs111033686	CC+	T		
GALT	rs111033690	CC+	G		
GALT	rs111033693	CC+	G		
GALT	rs111033694	GG+	A		
GALT	rs111033695	TT+	A		
GALT	rs111033715	TT+	C		
GALT	rs111033722	CC+	A		
GALT	rs111033725	CC+	T		
GALT	rs111033728	TT+	C		
GALT	rs111033735	GG+	A		
GALT	rs111033737	CC+	T		

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Abetalipoproteinemia (Diet)

NORMAL

It consists of a genetic disorder of lipid metabolism, with an autosomal recessive character, in which its carrier is unable to absorb fat from the diet through the intestinal mucosa.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CYP2C9	rs9332238	GG+	A	- -	
MTTP	rs146064714	GG+	T	- -	

Hyperferritinemia

NORMAL

Hyperferritinemia is the name given to the increase in ferritin detected in routine laboratory tests. Ferritin is a protein capable of binding up to 4,000 iron atoms, whose main function is to store iron in tissues and organs. When it is low, it may show iron deficiency, with or without anemia. Its elevation (hyperferritinemia) may be associated with multiple causes. Normal values for ferritin are 30-300 ng/L in men and 15-200 ng/L in women.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FTL	rs201241191	GG+	A	- -	

Need for Nutrients

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Magnesium

HIGH

Magnesium is extremely important for our body, it is responsible for the functioning and balance of reactions that occur daily in our body.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCB1	rs1128503	CT-	G		
ABCB1	rs2032583	TT-	G		
ABCB1	rs2235015	GG-	A,T		
ABCB1	rs2235040	GG-	A,G,T		
ABCB1	rs2235067	GG-	T		
ABCB1	rs3213619	TT-	G		
ABCB1	rs4148739	AA-	C		
ABCB1	rs10248420	AA+	G,T		
ABCB1	rs11983225	TT+	C		
ACE	rs4343	AG+	A		
ACP7	rs472265	AA+	G		
ADCY5	rs11708067	AA+	G		
ADD1	rs4961	GT+	A,T		
ADD1	rs4963	CG+	G,T		
ADD2	rs3755351	CC-	T		
ADIPOQ	rs17366743	TT+	C		
ADRB2	rs1800888	CC+	T		
AGT	rs699	CT-	G		
AGTR1	rs5186	AA+	C		
APOE	rs7412	TT+	T		
APOE4	rs429358	TT+	C		
ATP2B1	rs2681472	CT-	G		
BAG3	rs2234962	CT+	C		
BAG6	rs3117583	TT-	G		
BDNF	rs6265	GG-	T		
BRAP	rs3782886	AA-	C		
BTD	rs104893686	TT+	G		
BTD	rs104893687	CC+	T		
CAPN10	rs3792267	GG+	A		
CASR	rs17251221	AA+	G		

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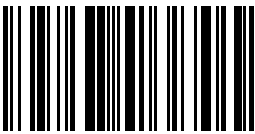
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CASZ1	rs880315	AA-	C	- -	
CCL2	rs1024611	CT-	G	+ -	
CDH13	rs8055236	GG+	A,C,T	+ +	
CDKAL1	rs4712523	AG+	G	- -	
CDKAL1	rs7756992	AG+	G,T	- -	
CDKN2A	rs10811661	TT+	T	+ +	
CDKN2A/B	rs2383208	AA+	G,T	- -	
CDKN2B-AS1	rs1011970	GT+	T	- -	
CDKN2B-AS1	rs1063192	TT-	A,T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CDKN2B-AS1	rs10757272	TT+	T	+ +	
CDKN2B-AS1	rs10757274	GG+	G	+ +	
CELSR2	rs4970834	CC+	T	- -	
CETP	rs2303790	AA+	G	- -	
CHRM2	rs324650	AT+	A	+ -	
CHRM2	rs1824024	GT-	A	+ -	
CHRM2	rs2061174	CT-	A,C	- -	
CLOCK	rs1801260	AA+	C,G,T	- -	
COMT	rs4680	AG+	A	- -	
CTLA4	rs231775	AG+	G	+ -	
CTLA4	rs3087243	AG+	G	+ -	
CTLA4	rs11571316	CT-	A,C	- -	
DAPK1	rs11141915	AC+	C	- -	
DCDC5	rs3925584	AG-	C	+ -	
DMD	rs1800278	AA-	C	- -	
DMD	rs1801187	GG-	T	- -	
DNAJC5B	rs13279522	TT+	C	- -	
DNER	rs1861612	AG+	A,C	- -	
DSG2	rs2230234	AA+	G,T	- -	
ERBB3	rs2292239	CC-	G	- -	
F12	rs1801020	CT-	G	+ -	
F7	rs6046	CT-	A	- -	
FDPS	rs2297480	AC-	G	+ -	
FKBP5	rs1360780	CC+	A,C	- -	
FMN2	rs17672135	TT+	C	+ +	

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FTO	rs1121980	CC-	A	- -	
GAD1	rs701492	TT+	T	- -	
GAD1	rs2241165	AA-	T	- -	
GCK	rs4607517	GG+	A,C	- -	
GCKR	rs780094	AG-	C	- -	
GPHN	rs104894470	CC+	T	- -	
GPX1	rs1050450	CC-	A	- -	
GRIA3	rs687577	CC+	C	+ +	
HCG17	rs3130380	GG+	A	- -	
HHEX	rs5015480	TT+	T	- -	
HIVEP2	rs761993070	CC+	A,G,T	- -	
HLA-DQA1	rs9272346	AA+	A,C,T	+ +	
HLA-DQB1	rs7454108	CC+	C	+ +	
HTR2A	rs6314	CC-	A	+ +	
HTR2A	rs1328674	AG-	C,G	- -	
HTR2C	rs3813929	CC+	G,T	- -	
IFIH1	rs1990760	CC+	T	- -	
IGF2	rs3741208	CC-	G,T	- -	
IGF2BP2	rs4402960	GG+	T	- -	
IL-1B	rs16944	AG+	G	+ -	
IL-2RA	rs2104286	AG-	C	+ -	
IL-4	rs2243250	CC+	T	- -	
IL-6	rs1800795	CG+	G	- -	
IL-7R	rs3194051	AA+	G	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs751891	CC-	T	- -	
INTERGENIC	rs791595	AG+	G	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs1545843	AG+	A	+ -	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs2592394	CC-	G	- -	
INTERGENIC	rs2820037	AA+	T	- -	
INTERGENIC	rs2943634	AC+	C,G	- -	
INTERGENIC	rs6746896	AA+	G	- -	

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INTERGENIC	rs7923837	AA+	A,T	- -	
INTERGENIC	rs10757278	GG+	G	+ +	
IRS1	rs2943641	CT+	C	+ -	
ITGA11	rs7174755	TT+	C,G	- -	
ITGB3	rs5918	TT+	C	- -	
JAZF1	rs1635852	CT+	C	- -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	
KCNE3	rs2270676	CT-	G	- -	
KCNJ11	rs5215	TT+	T	- -	
KCNJ11	rs5219	CC+	T	- -	
KCNQ1	rs2283228	AA+	C	- -	
KCNQ1	rs104894252	GG+	A,C	- -	
KL	rs9536314	TT+	A,G	- -	
LEPR	rs1137101	AA+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPL	rs326	AG+	G	- -	
LRP5	rs3736228	CT+	T	+ -	
LRP5	rs4988321	CT-	A,C	- -	
LRP8	rs5174	GG-	T	- -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MC4R	rs2229616	GG-	C	- -	
MDS1	rs6774494	GG+	A	- -	
MMP3	rs3025058	DI+	G	+ -	
MOV10	rs2932538	CC-	C,G	- -	
MRAS	rs2306374	TT+	C	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	

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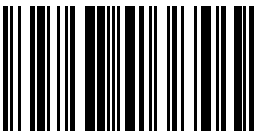
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MTNR1B	rs10830963	CC+	G	- -	
MTNR1B	rs10830964	CC+	T	- -	
MTRR	rs1801394	AA+	G	- -	
MUC1	rs4072037	AA-	A,T	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NAA25	rs17696736	AA+	G	- -	
NAF1	rs7675998	GG+	G,T	- -	
NEDD4L	rs2288774	CT+	A,C	- -	
NEDD4L	rs3865418	CC+	C	- -	
NEDD4L	rs4149601	AA+	A	- -	
NFE2L2	rs6721961	GG+	C,G	- -	
NFE2L2	rs35652124	CT+	C	- -	
NGF	rs6330	CC-	A	- -	
NGF	rs11466112	CC-	A	- -	
NOS3	rs1799983	GG+	T	- -	
NOS3	rs1800779	AA+	G	- -	
NOV	rs2071518	CC+	T	- -	
NPPA	rs5065	AA+	G	- -	
OPRM1	rs1799971	GG+	G	+ +	
PAX4	rs2233580	GG-	T	- -	
PEX5L	rs7630877	GG+	A,C	- -	
PHACTR1	rs9349379	AA+	A	- -	
PHTF1	rs6679677	CC+	A	- -	
PLPP3	rs17114036	AA+	G	- -	
PPARG	rs1801282	CG+	C	+ -	
PPARGC1A	rs8192678	GG-	T	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
PTPN2	rs1893217	CC-	G	+ +	
PTPN2	rs2542151	GG+	T	+ +	
PTPN22	rs2476601	GG+	G	- -	
RASGRP1	rs7403531	CC+	C,G	- -	
RHOU	rs6426514	GG+	A	- -	
RPSAP52	rs1531343	CC+	C,T	- -	
RYR2	rs34967813	AA+	G	- -	

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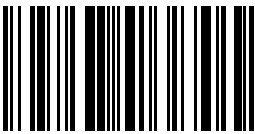
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SCN5A	rs1805124	GG-	T	- -	
SDHAF4	rs1048886	AA+	G	- -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SHROOM3	rs13146355	GG+	A	- -	
SHROOM3	rs17319721	GG+	A	- -	
SLC30A8	rs13266634	CC+	A,T	+ +	
SMAD3	rs17228212	TT+	C	- -	
STK39	rs6749447	GT+	G	+ -	
TAP2	rs241428	AA-	A,C,G	- -	
TAP2	rs1800454	GG-	T	- -	
TAS2R16	rs846664	TT-	C	- -	
TCF7L2	rs7901695	TT+	C	- -	
TCF7L2	rs7903146	CC+	G,T	- -	
TCF7L2	rs12255372	GG+	T	- -	
TGFBR3	rs1805110	CC-	A	- -	
THADA	rs7578597	TT+	C	- -	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TNF	rs1800629	GG+	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TPH1	rs1799913	AC-	A,T	- -	
TPH2	rs4565946	CT+	A,G,T	- -	
TPH2	rs4570625	GT+	G	- -	
TRIB3	rs2295490	AG+	G,T	+ -	
TRPM6	rs2274924	AA-	C	- -	
TRPM6	rs3750425	CC+	A,T	- -	
TRPM6	rs11144134	CT+	C	+ -	
TRPM6	rs121912625	CC-	A	- -	
TRPM6	rs869025214	GG-	T	- -	
TRPM7	rs55679040	TT+	C	- -	
TTN	rs2244492	GG-	T	- -	
TXNRD2	rs5748469	AA+	A	- -	
UBE2E2	rs7612463	AC+	A,G	- -	

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UBQLN1P	rs3130352	CC+	T	- -	
VDR	rs1544410	AG-	C,T	- -	
VDR	rs7975232	AC+	A	+ -	
VPS26A	rs4812829	AG+	A	- -	
WNT16	rs2707466	GG-	G,T	+ +	
WSCD2	rs9739493	CC+	C,G	- -	



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Copper

HIGH

It assesses a set of genes, determining whether your copper requirement is above average or greatly increased, if indicated in orange or red.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCB1	rs1128503	CT-	G		
ABCB1	rs3213619	TT-	G		
ACE	rs4343	AG+	A		
ADD1	rs4961	GT+	A,T		
ADRB2	rs1800888	CC+	T		
APOE	rs7412	TT+	T		
APOE4	rs429358	TT+	C		
ATP2B1	rs2681472	CT-	G		
ATP7B	rs60986317	GG+	A		
BAG3	rs2234962	CT+	C		
BRAP	rs3782886	AA-	C		
BTD	rs104893686	TT+	G		
BTD	rs104893687	CC+	T		
CCL2	rs1024611	CT-	G		
CDH13	rs8055236	GG+	A,C,T		
CDKN2B-AS1	rs1011970	GT+	T		
CDKN2B-AS1	rs1063192	TT-	A,T		
CDKN2B-AS1	rs10116277	TT+	T		
CDKN2B-AS1	rs10757272	TT+	T		
CDKN2B-AS1	rs10757274	GG+	G		
CETP	rs2303790	AA+	G		
CFH	rs1061170	TT+	T		
DMD	rs1800278	AA-	C		
DMD	rs1801187	GG-	T		
DNAJC5B	rs13279522	TT+	C		
DPYD	rs1801266	CC-	A		
DPYD	rs1801267	GG-	T		
DPYD	rs1801268	GG-	A		
DSG2	rs2230234	AA+	G,T		
F12	rs1801020	CT-	G		

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F7	rs6046	CT-	A	- -	
FMN2	rs17672135	TT+	C	+ +	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
HTRA1	rs11200638	AG+	A	+ -	
IL-4	rs2243250	CC+	T	- -	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs10757278	GG+	G	+ +	
ITGB3	rs5918	TT+	C	- -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	
KCNE3	rs2270676	CT-	G	- -	
KL	rs9536314	TT+	A,G	- -	
LRP8	rs5174	GG-	T	- -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MMP3	rs3025058	DI+	G	+ -	
MRAS	rs2306374	TT+	C	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NAF1	rs7675998	GG+	G,T	- -	
NOS3	rs1800779	AA+	G	- -	
NPPA	rs5065	AA+	G	- -	
PHACTR1	rs9349379	AA+	A	- -	
PLPP3	rs17114036	AA+	G	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	

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SELENBP1	rs2769264	AC-	G	+ -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SMAD3	rs17228212	TT+	C	- -	
SMIM1	rs1175550	TT-	G	+ +	
SOD3	rs1799895	CC+	G	- -	
SOD3	rs2855262	TT+	C	- -	
STAT4	rs10181656	CG+	C	+ -	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TNF	rs1800629	GG+	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TTN	rs2244492	GG-	T	- -	
TXNRD2	rs5748469	AA+	A	- -	

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Lutein

HIGH

Benefit from consumption of lutein. Results in red is beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T		
ABCB1	rs1128503	CT-	G		
ABCB1	rs3213619	TT-	G		
ACE	rs4343	AG+	A		
ADD1	rs4961	GT+	A,T		
ADRB2	rs1800888	CC+	T		
APOE	rs7412	TT+	T		
APOE4	rs429358	TT+	C		
ARMS2	rs10490924	GT+	T		
ATP2B1	rs2681472	CT-	G		
BAG3	rs2234962	CT+	C		
BCO1	rs6564851	TT+	G		
BCO1	rs7501331	CC+	T		
BRAP	rs3782886	AA-	C		
BTD	rs104893686	TT+	G		
BTD	rs104893687	CC+	T		
C2	rs547154	CC-	T		
C2	rs9332739	GG+	A,C		
C3	rs2230199	CG-	C,T		
C3	rs2230205	AG-	T		
CCL2	rs1024611	CT-	G		
CD36	rs13230419	CC+	T		
CDH13	rs8055236	GG+	A,C,T		
CDKN2B-AS1	rs1011970	GT+	T		
CDKN2B-AS1	rs1063192	TT-	A,T		
CDKN2B-AS1	rs10116277	TT+	T		
CDKN2B-AS1	rs10757272	TT+	T		
CDKN2B-AS1	rs10757274	GG+	G		
CETP	rs5880	GG+	C		
CETP	rs5882	AG+	A		
CETP	rs708272	CT-	A		

Name

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Age

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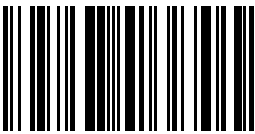
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Sample

CETP	rs1532624	TT-	A	- -	
CETP	rs1864163	GG+	A	- -	
CETP	rs2303790	AA+	G	- -	
CFB	rs4151667	TT+	A	- -	
CFH	rs800292	CT-	A	+ -	
CFH	rs1061147	CC+	C	- -	
CFH	rs1061170	TT+	T	- -	
CFH	rs1065489	GT+	T	- -	
CFH	rs1329428	AG-	T	- -	
CFH	rs3753394	CT+	T	- -	
COL8A1	rs13081855	GG+	T	- -	
CRYBB3	rs74315490	GG+		- -	
CX3CR1	rs3732378	AG+	A	+ -	
CX3CR1	rs3732379	CT+	T	- -	
DMD	rs1800278	AA-	C	- -	
DMD	rs1801187	GG-	T	- -	
DNAJC5B	rs13279522	TT+	C	- -	
DPYD	rs1801266	CC-	A	- -	
DPYD	rs1801267	GG-	T	- -	
DPYD	rs1801268	GG-	A	- -	
DSG2	rs2230234	AA+	G,T	- -	
EPHA2	rs3754334	CC-	A	- -	
EPHA2	rs116506614	CC+		- -	
F12	rs1801020	CT-	G	+ -	
F7	rs6046	CT-	A	- -	
FMN2	rs17672135	TT+	C	+ +	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
HTRA1	rs11200638	AG+	A	+ -	
IL-4	rs2243250	CC+	T	- -	
INTERGENIC	rs493258	AG-	C	+ -	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs10468017	CC+	T	- -	

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INTERGENIC	rs10757278	GG+	G	+ +	
INTERGENIC	rs12678919	AA+	G	- -	
ITGB3	rs5918	TT+	C	- -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	
KCNE3	rs2270676	CT-	G	- -	
KL	rs9536314	TT+	A,G	- -	
LRP8	rs5174	GG-	T	- -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MC1R	rs1805005	GG+	T	- -	
MC1R	rs1805007	CC+	T	- -	
MC1R	rs1805008	CC+	T	- -	
MC1R	rs1805009	GG+	A,C	- -	
MMP3	rs3025058	DI+	G	+ -	
MRAS	rs2306374	TT+	C	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NAF1	rs7675998	GG+	G,T	- -	
NOS3	rs1800779	AA+	G	- -	
NOTCH4	rs422951	AG-	C	- -	
NPPA	rs5065	AA+	G	- -	
PHACTR1	rs9349379	AA+	A	- -	
PITX2	rs6533526	GG+	A	- -	
PLPP3	rs17114036	AA+	G	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
REST	rs1713985	AC-	T	- -	
REST	rs2227902	GG+	T	- -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	

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SERPINF1	rs1136287	CT+	T	+ -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SKIV2L	rs429608	GG+	A	- -	
SKIV2L	rs2734331	TT-	G	- -	
SMAD3	rs17228212	TT+	C	- -	
STAT4	rs10181656	CG+	C	+ -	
TLR3	rs3775291	GG-	G,T	+ +	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TNF	rs1800629	GG+	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TTN	rs2244492	GG-	T	- -	
TXNRD2	rs5748469	AA+	A	- -	
VEGFA	rs3025039	CC+	T	- -	

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Selenium

HIGH

Results in orange or red indicate the susceptibility to the need for selenium. It plays a critical role in metabolism and thyroid function and helps protect your body from damage caused by oxidative stress. What's more, selenium may help boost your immune system, slow age-related mental decline, and even reduce your risk of heart disease.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
A2M	rs669	AA-	C		
ABCA1	rs1883025	AG-	T		
ABCA7	rs3764650	TT+	G		
ABCA7	rs115550680	AA+	G		
ABCB1	rs1128503	CT-	G		
ABCB1	rs3213619	TT-	G		
ACE	rs4343	AG+	A		
ADD1	rs4961	GT+	A,T		
ADRB2	rs1800888	CC+	T		
AGAP2	rs12368653	GG+	A,T		
ALDH2	rs671	GG+	A		
APOC1	rs4420638	AA+	G		
APOE	rs7412	TT+	T		
APOE4	rs429358	TT+	C		
ARHGAP20	rs326946	TT-	C		
ATM	rs664143	CC-	G,T		
ATP2B1	rs2681472	CT-	G		
BAG3	rs2234962	CT+	C		
BATF	rs2300603	TT+	C		
BCO1	rs12934922	AA+	G,T		
BDNF	rs6265	GG-	T		
BIN1	rs744373	CT-	G		
BRAP	rs3782886	AA-	C		
BTD	rs104893686	TT+	G		
BTD	rs104893687	CC+	T		
C1ORF106	rs7522462	AG+	A		
CCL2	rs1024611	CT-	G		
CD2AP	rs9349407	GG+	C		
CD2AP	rs10948363	AA+	G		

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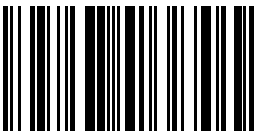
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Health insurance



Sample

CD58	rs12044852	CC+	A	- -	
CD86	rs1129055	GG+	A	- -	
CD86	rs9282641	GG+	A	- -	
CDH13	rs8055236	GG+	A,C,T	+ +	
CDKN1A	rs1801270	CC+	A,T	- -	
CDKN2B-AS1	rs1011970	GT+	T	- -	
CDKN2B-AS1	rs1063192	TT-	A,T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CDKN2B-AS1	rs10757272	TT+	T	+ +	
CDKN2B-AS1	rs10757274	GG+	G	+ +	
CETP	rs5882	AG+	A	+ -	
CETP	rs2303790	AA+	G	- -	
CHAT	rs733722	CC+	A,G,T	- -	
CHST12	rs6952809	CC+	C	- -	
CLPTM1L	rs401681	CT+	T	+ -	
CLSTN2	rs17411949	CC+	T	- -	
CLU	rs11136000	CC+	C	- -	
CNKSR3	rs2275336	GG+	A	- -	
CPS1	rs1047891	CC+	A	- -	
CR1	rs3818361	CC-	G	- -	
CR1	rs6656401	GG+	G,T	- -	
CTC1	rs3027247	TT-	C	- -	
CTLA4	rs231775	AG+	G	+ -	
CYP1A1	rs1048943	AA-	A,C,G	- -	
CYP1A1	rs1800031	TT-	G	- -	
CYP1A1	rs41279188	CC-	A,T	- -	
CYP1A1	rs56313657	GG-	A,T	- -	
CYP1A1	rs72547509	TT-	G,T	- -	
CYP1B1	rs1056836	CC-	C	- -	
CYP24A1	rs2296241	GG+	A	- -	
CYP24A1	rs4809957	AG+	G	- -	
CYP24A1	rs6068816	CT+	T	- -	
CYP2E1	rs2070673	TT+	T	- -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A5	rs776746	AG-	C	+ -	

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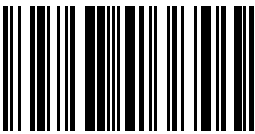
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Sample

DBC1	rs10984447	AA+	G	+ +	
DIO1	rs2235544	AC+	A,T	+ -	
DIO1	rs11206244	CC+	T	- -	
DIRC3	rs966423	CT+	G,T	+ -	
DKKL1	rs2303759	TT+	G	- -	
DLEU1	rs2762051	CC+	T	- -	
DLG2	rs17148090	AA+	C,G	- -	
DMD	rs1800278	AA-	C	- -	
DMD	rs1801187	GG-	T	- -	
DMD	rs104894788	GG-	T	- -	
DMGDH	rs921943	AG-	T	+ -	
DNAJC5B	rs13279522	TT+	C	- -	
DPYD	rs1801266	CC-	A	- -	
DPYD	rs1801267	GG-	T	- -	
DPYD	rs1801268	GG-	A	- -	
DSG2	rs2230234	AA+	G,T	- -	
E2F3	rs1570155	AG+	A,T	+ -	
EPHX1	rs1051740	TT+	C	- -	
EPHX1	rs2234922	AG+	G,T	+ -	
F12	rs1801020	CT-	G	+ -	
F7	rs6046	CT-	A	- -	
FAM47E	rs6812193	CC+	T	- -	
FASLG	rs763110	TT+	T	- -	
FGF7	rs4338740	CT+	C	+ -	
FMN2	rs17672135	TT+	C	+ +	
FRMD4A	rs10906466	AG+	C,G	- -	
G6PD	rs1050828	CC+	T	- -	
GAB2	rs2373115	GG-	A	- -	
GCKR	rs1260326	CT+	C	+ -	
GOLM1	rs7019241	CT+	G,T	- -	
GOLM1	rs10868366	GT+	T	- -	
GPX1	rs1050450	CC-	A	- -	
GSTP1	rs1695	GG+	G	+ +	
HLA	rs2517532	CT-	G	+ -	
HLA-DRA	rs3135391	CC-	A	- -	

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HLA-DRA	rs61731956	GG+	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
HLA-DRB1	rs3135388	CC-	A	- -	
IL-2RA	rs2104286	AG-	C	- -	
IL-2RA	rs12722489	AG-	T	- -	
IL-4	rs2243250	CC+	T	- -	
IL-6	rs1800795	CG+	G	- -	
IL-7R	rs6897932	CC+	T	+ +	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs679582	AG+	G	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2119704	CC+	A	- -	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs4728142	AG+	A	- -	
INTERGENIC	rs10162002	AG+	A	- -	
INTERGENIC	rs10757278	GG+	G	+ +	
INTERGENIC	rs13192841	GG+	A	- -	
ITGB3	rs5918	TT+	C	- -	
IYD	rs121918139	TT+	C	- -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	
KCNE3	rs2270676	CT-	G	- -	
KL	rs9536314	TT+	A,G	- -	
LAG3	rs870849	CT+	C	- -	
LDLR	rs688	CC+	T	- -	
LRP6	rs2160525	AG+	G	- -	
LRP8	rs5174	GG-	T	- -	
LRRK2	rs11564148	AT+	A	- -	
LRRK2	rs34637584	GG+	A	- -	
LRRK2	rs34778348	GG+	A	- -	
LTA	rs1799724	CT+	T	+ -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MAOB	rs1799836	AA-	A,C	+ +	

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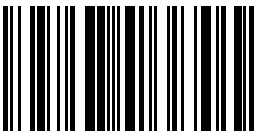
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MAPT	rs393152	AA+	G	- -	
MC1R	rs1805008	CC+	T	- -	
MCCC1	rs10513789	GG+	G	- -	
MMP3	rs3025058	DI+	G	+ -	
MPO	rs2333227	TT+	T	- -	
MPV17L2	rs874628	TT-	G,T	- -	
MRAS	rs2306374	TT+	C	- -	
MS4A6A	rs610932	CC-	G	- -	
MTF1	rs3748682	TT+	C	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
MTRR	rs1801394	AA+	G	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NAF1	rs7675998	GG+	G,T	- -	
NFE2L2	rs35652124	CT+	C	- -	
NOS3	rs1800779	AA+	G	- -	
NPPA	rs5065	AA+	G	- -	
PCDH11X	rs5984894	AA+	G	- -	
PCK1	rs8192708	AG+	G	+ -	
PDE8B	rs4704397	AG+	A	+ -	
PHACTR1	rs9349379	AA+	A	- -	
PHTF1	rs6679677	CC+	A	- -	
PICALM	rs3851179	AG-	C	+ -	
PICALM	rs10792832	AG+	G	+ -	
PIK3CA	rs2699887	CT+	T	- -	
PIK3CA	rs104886003	GG+	A,C	- -	
PIK3CA	rs1057519942	GG+	A	- -	
PLAU	rs2227562	GG+	A	- -	
PLAU	rs2227564	TT+	C	- -	
PLD3	rs145999145	GG+	A	- -	

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PLPP3	rs17114036	AA+	G	- -	
POLN	rs1923775	TT+	T	- -	
PPP1R3B	rs3748140	GG-	T	- -	
PPP1R3B	rs9987289	GG+	G	- -	
PRRC2C	rs2421847	AA+	G	- -	
PSEN1	rs63749824	CC+	G,T	- -	
PSEN2	rs63750197	CC+	T	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
PTCSC2	rs925489	CT+	C,T	- -	
PTEN	rs121909229	GG+	A,C,T	- -	
PTEN	rs121909232	CC+	G	- -	
RAB25	rs34372695	CC+	G,T	- -	
RNASEL	rs3738579	CT-	G	+ -	
RPS6KB1	rs630923	CC+	A	- -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SLC30A7	rs11581062	AA+	G	- -	
SLC39A6	rs1050631	CT-	A	+ -	
SMAD3	rs17228212	TT+	C	- -	
SNCA	rs356219	AA+	G	- -	
STAT4	rs10181656	CG+	C	+ -	
TERT	rs2736098	AG-	T	+ -	
TG	rs35301433	AA+	G	- -	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TNF	rs1800629	GG+	A	- -	
TNFSF14	rs344560	GG-	C	- -	
TNFSF14	rs2291667	CC-	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TREM2	rs75932628	CC+	A,T	- -	
TTN	rs2244492	GG-	T	- -	

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TXNRD2	rs5748469	AA+	A	- -	
VAV3	rs4915077	TT+	C	- -	
XPC	rs2228000	CC-	A	- -	
XPC	rs2228001	AA-	T	- -	
XRCC1	rs1799782	CT-	A	+ -	
ZNF767P	rs354033	CC-	A	- -	



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Zinc

HIGH

Zinc enables several biochemical functions, as it is a component of numerous enzymes, including alcohol dehydrogenase, superoxide dismutase, carbonic anhydrase, alkaline phosphatase and central nervous system enzymes.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T		
ABCB1	rs1128503	CT-	G		
ABCB1	rs2032583	TT-	G		
ABCB1	rs2235015	GG-	A,T		
ABCB1	rs2235040	GG-	A,G,T		
ABCB1	rs2235067	GG-	T		
ABCB1	rs3213619	TT-	G		
ABCB1	rs4148739	AA-	C		
ABCB1	rs10248420	AA+	G,T		
ABCB1	rs11983225	TT+	C		
ACP7	rs472265	AA+	G		
ADA	rs73598374	GG-	A,G,T		
ADCY5	rs11708067	AA+	G		
ADIPOQ	rs17366743	TT+	C		
ALDH2	rs671	GG+	A		
ATM	rs664143	CC-	G,T		
BCO1	rs12934922	AA+	G,T		
BDNF	rs6265	GG-	T		
CA1	rs1532423	CT-	A		
CAPN10	rs3792267	GG+	A		
CDKAL1	rs4712523	AG+	G		
CDKAL1	rs7756992	AG+	G,T		
CDKN1A	rs1801270	CC+	A,T		
CDKN2A	rs10811661	TT+	T		
CDKN2A/B	rs2383208	AA+	G,T		
CFH	rs1061170	TT+	T		
CHRM2	rs324650	AT+	A		
CHRM2	rs1824024	GT-	A		
CHRM2	rs2061174	CT-	A,C		
CLOCK	rs1801260	AA+	C,G,T		

Name

Sample

Age

Gender

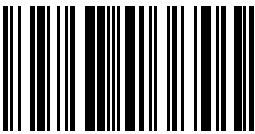
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CLPTM1L	rs401681	CT+	T	+ -	
CTLA4	rs231775	AG+	G	+ -	
CYP1A1	rs1048943	AA-	A,C,G	- -	
CYP1A1	rs1800031	TT-	G	- -	
CYP1A1	rs41279188	CC-	A,T	- -	
CYP1A1	rs56313657	GG-	A,T	- -	
CYP1A1	rs72547509	TT-	G,T	- -	
CYP1B1	rs1056836	CC-	C	- -	
CYP2E1	rs2070673	TT+	T	- -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A5	rs776746	AG-	C	+ -	
DIRC3	rs966423	CT+	G,T	+ -	
DNER	rs1861612	AG+	A,C	- -	
DPYD	rs1801266	CC-	A	- -	
DPYD	rs1801267	GG-	T	- -	
DPYD	rs1801268	GG-	A	- -	
E2F3	rs1570155	AG+	A,T	+ -	
EPHX1	rs1051740	TT+	C	- -	
FASLG	rs763110	TT+	T	- -	
FKBP5	rs1360780	CC+	A,C	- -	
FTO	rs1121980	CC-	A	- -	
G6PD	rs1050828	CC+	T	- -	
GAD1	rs701492	TT+	T	- -	
GAD1	rs2241165	AA-	T	- -	
GCK	rs4607517	GG+	A,C	- -	
GCKR	rs780094	AG-	C	- -	
GPHN	rs104894470	CC+	T	- -	
GPX1	rs1050450	CC-	A	- -	
GSTP1	rs1695	GG+	G	+ +	
HHEX	rs5015480	TT+	T	- -	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
HTR2A	rs6314	CC-	A	+ +	
HTR2A	rs1328674	AG-	C,G	- -	
HTR2C	rs3813929	CC+	G,T	- -	

Name

Sample

Age

Gender

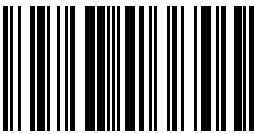
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HTRA1	rs11200638	AG+	A	+ -	
IGF2BP2	rs4402960	GG+	T	- -	
IL-1B	rs16944	AG+	G	+ -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs791595	AG+	G	+ -	
INTERGENIC	rs1545843	AG+	A	+ -	
INTERGENIC	rs7923837	AA+	A,T	- -	
IRS1	rs2943641	CT+	C	+ -	
JAZF1	rs1635852	CT+	C	- -	
KCNJ11	rs5215	TT+	T	- -	
KCNJ11	rs5219	CC+	T	- -	
KCNQ1	rs2283228	AA+	C	- -	
KCNQ1	rs104894252	GG+	A,C	- -	
LEPR	rs1137101	AA+	G	- -	
MAOA	rs909525	GG-	T	+ +	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTNR1B	rs10830963	CC+	G	- -	
MTRR	rs1801394	AA+	G	- -	
NAF1	rs7675998	GG+	G,T	- -	
NBDY	rs4826508	CT+	T	+ -	
OXTR	rs237899	GG+	A,C	- -	
OXTR	rs2254298	GG+	A	- -	
PAX4	rs2233580	GG-	T	- -	
PEX5L	rs7630877	GG+	A,C	- -	
PIK3CA	rs2699887	CT+	T	- -	
PIK3CA	rs104886003	GG+	A,C	- -	
PIK3CA	rs1057519942	GG+	A	- -	
PPARG	rs1801282	CG+	C	+ -	
PPCDC	rs2120019	CT+	C	+ -	
PTEN	rs121909229	GG+	A,C,T	- -	
PTEN	rs121909232	CC+	G	- -	
RASGRP1	rs7403531	CC+	C,G	- -	
RHOU	rs6426514	GG+	A	- -	
RNASEL	rs3738579	CT-	G	+ -	

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RPSAP52	rs1531343	CC+	C,T	- -	
SDHAF4	rs1048886	AA+	G	- -	
SLC30A8	rs13266634	CC+	A,T	+ +	
SLC39A6	rs1050631	CT-	A	+ -	
SOD3	rs1799895	CC+	G	- -	
SOD3	rs2855262	TT+	C	- -	
STAT4	rs10181656	CG+	C	+ -	
TCF7L2	rs7901695	TT+	C	- -	
TCF7L2	rs7903146	CC+	G,T	- -	
TCF7L2	rs12255372	GG+	T	- -	
TERT	rs2736098	AG-	T	+ -	
TGFBR3	rs1805110	CC-	A	- -	
THADA	rs7578597	TT+	C	- -	
TPH1	rs1799913	AC-	A,T	- -	
TRIB3	rs2295490	AG+	G,T	+ -	
UBE2E2	rs7612463	AC+	A,G	- -	
VPS26A	rs4812829	AG+	A	- -	
XPC	rs2228000	CC-	A	- -	
XPC	rs2228001	AA-	T	- -	
XRCC1	rs1799782	CT-	A	+ -	

Iron

HIGH

Need for iron. Orange or red result indicates greater need for Iron.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HFE	rs1799945	GG+	G	- -	
HFE	rs1800562	GG+	A	+ +	
NOS3	rs1800779	AA+	G	- -	
TF	rs1049296	CT+	T	+ -	
TF	rs1799852	CC+	T	- -	
TF	rs3811647	AG+	G	+ -	
TF	rs121918680	GG+	A	- -	
TFR2	rs7385804	CC+	C	+ +	
TMPRSS6	rs855791	TT-	G,T	+ +	
TMPRSS6	rs4820268	GG+	A	+ +	

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Resveratrol

HIGH

Resveratrol is a polyphenol found mainly in the skin and seeds of red or black grapes - that's why it is present in wine and red grape juice. In addition, blueberries, cranberries, cocoa and peanuts also contain the compound. Studies show several benefits of the compound, such as being anti-inflammatory, cardioprotective, hepatoprotective, helping to prevent diabetes, helping with weight loss, among other points. In terms of skin, what interests us a lot is the fact that the compound is an antioxidant and has a protective action against ultraviolet radiation.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ABCG8	rs6544713	CC+	C	- -	
APOC1	rs4420638	AA+	G	- -	
APOE	rs7412	TT+	T	+ +	
AR	rs5031002	GG+	A	- -	
B3GALT1	rs13020412	AA+	G	- -	
BRCA2	rs4942486	CT+	C	+ -	
CASC17	rs1859962	GG+	T	+ +	
CASC21	rs16902104	CC+	G,T	- -	
CASC8	rs1447295	CC+	C,T	- -	
CASC8	rs6983267	GG+	T	+ +	
CDH1	rs16260	AC+	A	+ -	
CDKN1B	rs34330	CT+	C	+ -	
CHEK2	rs17879961	TT-	C,G	- -	
CPS1	rs1047891	CC+	A	- -	
CR1L	rs4844614	GT+	T	+ -	
CYP1A1	rs1048943	AA-	A,C,G	- -	
CYP24A1	rs2296241	GG+	A	- -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A4	rs4646438	---		- -	
CYP3A4	rs55785340	AA+	G	- -	
DAB2IP	rs1571801	AC-	T	- -	
DEF8	rs4268748	CT+	C	+ -	
DNAH11	rs12670798	TT+	C	- -	
ELAC2	rs4792311	GG+	A,C	- -	
ERI1	rs96621	CT+	C	- -	
FABP2	rs1799883	GG-	A,C,G	- -	
FADS2	rs174570	CC+	T	- -	

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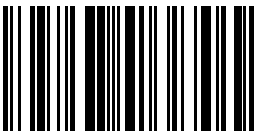
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FGFR4	rs351855	CC-	A	- -	
GPX1	rs1050450	CC-	A	- -	
HDAC4	rs3791406	CT+	C	- -	
HNF1A	rs2650000	GT-	A	+ -	
IL-10	rs1800896	AG-	C	+ -	
INTERGENIC	rs5945572	AG+	G	+ -	
INTERGENIC	rs7965399	TT+	A,C	- -	
INTERGENIC	rs10505483	AG-	T	+ -	
INTERGENIC	rs10896449	AA+	G	- -	
INTERGENIC	rs12661968	TT+	C	- -	
IRF4	rs12203592	CC+	T	- -	
ITGA2	rs1126643	CC+	T	- -	
JAZF1	rs10486567	AG+	A	+ -	
KLF6	rs3750861	CC+	T	- -	
LDLR	rs6511720	GG+	T	- -	
MC1R	rs1805005	GG+	T	- -	
MC1R	rs1805007	CC+	T	- -	
MC1R	rs1805008	CC+	T	- -	
MC1R	rs1805009	GG+	A,C	- -	
MGMT	rs2308327	AA+	G	- -	
MSMB	rs10993994	AA-	G	- -	
NAF1	rs7675998	GG+	G,T	- -	
OR4A46P	rs7395662	GG+	A	- -	
PCAT19	rs11672691	AA+	T	- -	
PCIF1	rs7679	TT+	C	- -	
SLC45A2	rs185146	CT+	T	+ -	
TCF2	rs4430796	AG+	G	+ -	
TCF7L2	rs12255372	GG+	T	- -	
TMPRSS2	rs12329760	CT+	T	- -	
XRCC1	rs25489	GG-	G,T	- -	
ZNF827	rs13149290	TT+	T	- -	

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Iodine

HIGH

Many genes involved in thyroid function and autoimmune disorders are sensitive to iodine intake. Variations in these genes may increase the risk of iodine deficiency, hypothyroidism, and developmental delays in early life. For people who carry these variations, adequate iodine intake is especially important to minimize the risk of thyroid dysfunction.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCC4	rs9561778	GT+	A,T		
ATM	rs1800056	TT+	C		
ATM	rs1800058	CC+	T		
ATM	rs1801673	AA+	T		
ATM	rs3092856	CC+	T		
ATM	rs3218695	CC+	A,T		
ATM	rs3218707	GG+	C		
ATM	rs4986761	TT+	C		
AURKA	rs1047972	GG-	T		
BRCA1	rs16942	AG-	A,C		
BRCA1	rs1799950	AA-	C		
BRCA1	rs1799966	AG-	A,C		
BRCA1	rs1800709	CC-	A		
BRCA1	rs2227945	AA-	C,G		
BRCA1	rs4986850	GG-	A,T		
BRCA1	rs4986852	GG-	G,T		
BRCA2	rs144848	GT-	C		
BRCA2	rs766173	TT-	C,G		
BRCA2	rs1799944	AA+	G		
BRCA2	rs1799954	CC+	A,T		
BRCA2	rs1801426	AA+	G		
BRCA2	rs4987047	AA+	T		
BRCA2	rs4987117	CC+	T		
BRCA2	rs11571747	AA+	C		
BRCA2	rs11571833	AA+	T		
BRCA2	rs28897743	GG+	A,C,T		
BRCA2	rs80358785	CC+	A,G		
BRCA2	rs80359604	II+	T		
CASC16	rs3803662	CT-	G		



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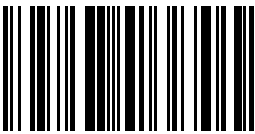
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CASC17	rs1859962	GG+	T	+ +	
CASC21	rs13281615	AG+	G	- -	
CASC21	rs16902104	CC+	G,T	- -	
CASC8	rs1447295	CC+	C,T	- -	
CASC8	rs6983267	GG+	T	+ +	
CASP8	rs1045485	GG+	A,C,T	- -	
CDH1	rs16260	AC+	A	+ -	
CDKN1A	rs1801270	CC+	A,T	- -	
CDKN1B	rs34330	CT+	C	+ -	
CHEK2	rs17879961	TT-	C,G	- -	
COMT	rs4680	AG+	A	+ -	
COMT	rs165631	CC+	T	- -	
CTLA4	rs231775	AG+	G	+ -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A4	rs4646438	---		- -	
CYP3A4	rs55785340	AA+	G	- -	
DAB2IP	rs1571801	AC-	T	- -	
ELAC2	rs4792311	GG+	A,C	- -	
FGF7	rs4338740	CT+	C	+ -	
FGFR2	rs1219648	AA+	G,T	- -	
FGFR2	rs2981582	CC-	G	- -	
FGFR4	rs351855	CC-	A	- -	
FTO	rs17817449	TT+	A,G	- -	
GSTP1	rs1695	GG+	G	+ +	
HER2	rs1136201	AA+	G,T	- -	
HLA	rs2517532	CT-	G	- -	
HMMR	rs299284	CC+	T	- -	
IL-10	rs1800896	AG-	C	+ -	
INTERGENIC	rs2056116	AG+	G	+ -	
INTERGENIC	rs5945572	AG+	G	+ -	
INTERGENIC	rs7965399	TT+	A,C	- -	
INTERGENIC	rs10505483	AG-	T	+ -	
INTERGENIC	rs10816625	AA+	G	- -	
INTERGENIC	rs10896449	AA+	G	- -	
INTERGENIC	rs13387042	AA+	G	- -	

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INTERGENIC	rs16901979	AC+	A	+ -	
ITGA2	rs1126643	CC+	T	- -	
JAZF1	rs10486567	AG+	A	+ -	
KLF6	rs3750861	CC+	T	- -	
LSP1	rs3817198	CT+	C	- -	
MAP3K1	rs889312	AA+	A	- -	
MSMB	rs10993994	AA-	G	- -	
NCOA3	rs2230782	GG+	A,C	- -	
NQO1	rs1800566	CC-	A	- -	
PCAT19	rs11672691	AA+	T	- -	
PDE8B	rs4704397	AG+	A	+ -	
PHTF1	rs6679677	CC+	A	- -	
PTCSC2	rs925489	CT+	C,T	- -	
RNASEL	rs3738579	CT-	G	+ -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SLCO1B3	rs4149117	GG+	C,G	- -	
SLCO1B3	rs7311358	AA+	A	- -	
SLCO1B3	rs11045585	AA+	G	- -	
TCF2	rs4430796	AG+	G	+ -	
TCF7L2	rs12255372	GG+	T	- -	
TMPRSS2	rs12329760	CT+	T	- -	
TNF	rs361525	GG+	A	- -	
TP53	rs1042522	CG-	C,T	+ -	
VAV3	rs4915077	TT+	C	- -	
VDR	rs731236	CT-	G	- -	
VTCN1	rs10754339	AA+	A	- -	
WRN	rs1346044	CT+	C	- -	
WRN	rs3087425	CC+	T	- -	
XRCC1	rs25489	GG-	G,T	- -	
XRCC2	rs3218536	GG-	G,T	- -	
ZNF827	rs13149290	TT+	T	- -	

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Uridine Monophosphate

MEDIUM-HIGH

It stimulates the growth of axons, stabilizes cell membranes in nerve cells and increases acetylcholine synthesis. It is used to prevent neurological disorders including Alzheimer's.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	GG-	T	- -	
CLOCK	rs1801260	AA+	C,G,T	- -	
CLSTN2	rs6439886	AA+	G	+ +	
CLSTN2	rs17348572	TT+	C	+ +	
DBH	rs1611115	CT+	A,C,G	- -	
DRD4	rs1800955	CT+	C,G	+ -	
DTNBP1	rs2619522	GT-	C	- -	
GRK3	rs3730315	AA+	G	- -	
HES1	rs4686673	CC+	T	- -	
HTR1B	rs6296	CC+	G	- -	
HTR2A	rs6314	CC-	A	- -	
NT5C3A	rs104894025	AA-	A	- -	
NTF3	rs6332	GG+	A,T	- -	
SLC6A2	rs3785143	CC+	T	- -	
SLC6A3	rs27072	CT+	A,T	+ -	
SNAP25	rs3746544	AA-	T	- -	
TPH2	rs1843809	TT+	T	- -	
WWC1	rs17070145	CT+	T	+ -	

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Chromium Picolinate

MEDIUM-HIGH

Chromium Picolinate acts by potentiating the action of insulin and can increase the fluidity of the cell membrane, facilitating the binding of insulin with its receptor and its internalization. Its role in lipid metabolism is related to an increase in high density lipoproteins (HDL) and a reduction in total cholesterol and low density lipoproteins (LDL, VLDL) in individuals with initially high values. It is indicated in case of lack of chromium in the body and to contribute to weight loss, but it can also be used as a nutritional supplement to lower cholesterol and high triglycerides, diabetes mellitus and "non-insulin" dependent diabetes and obesity. The body only needs small amounts of chromium daily, and its absorption in the intestine is best when chromium is ingested with foods rich in vitamin C, such as oranges and pineapples. The use of chromium picolinate should be done according to the doctor's or nutritionist's indication.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ABCG8	rs6544713	CC+	C	- -	
APOA5	rs2266788	TT-	A	- -	
APOA5	rs3135506	GG+	C	- -	
APOC1	rs4420638	AA+	G	- -	
APOE	rs7412	TT+	T	+ +	
AR	rs5031002	GG+	A	- -	
BRCA2	rs4942486	CT+	C	+ -	
CPS1	rs1047891	CC+	A	- -	
CR1L	rs4844614	GT+	T	+ -	
DNAH11	rs12670798	TT+	C	- -	
DOCK7	rs10889353	AC+	C,T	+ -	
FABP2	rs1799883	GG-	A,C,G	- -	
FADS1	rs174547	TT+	C	- -	
FADS2	rs174570	CC+	T	- -	
GCKR	rs1260326	CT+	C	+ -	
GPX1	rs1050450	CC-	A	- -	
LDLR	rs6511720	GG+	T	- -	
LPL	rs285	CT+	T	- -	
LPL	rs320	GT+	G	+ -	
LPL	rs13702	AG-	A,C	+ -	
NAF1	rs7675998	GG+	G,T	- -	
OR4A46P	rs7395662	GG+	A	- -	
RAB11B	rs2967605	GG-	T	- -	
TMEM241	rs9949617	CC+	T	- -	

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Choline

MEDIUM-HIGH

Helps in the maintenance of the brain and liver. Choline is one of the B-complex vitamins. Choline's two main functions involve the brain. It is important for the formation of the neurotransmitter acetylcholine, which indirectly regulates memory.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHAT	rs2177369	CC-	G		
CHAT	rs3810950	GG+	A		
CHKB	rs10791957	AA+	C		
FMO3	rs2266782	AG+	A		
MTHFD1	rs2236225	CC-	A		
MTHFD1L	rs6922269	AG+	A		
MTHFD1L	rs17349743	TT+	C		
PEMT	rs7946	CT+	T		
PEMT	rs4244593	AA-	A,G		
PEMT	rs4646406	AA-	A		

Turmeric (Curcumin)

MEDIUM

Benefit from regular turmeric intake, by stimulating the endogenous antioxidant system, and stimulating DNA repair.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BIN1	rs744373	CT-	G		
SOD3	rs1799895	CC+	G		

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Zeaxanthin

MEDIUM

Zeaxanthin is a pigment called carotene, with an antioxidant action. Low plasma Zeaxanthin concentrations increase the risk of developing age-related macular degeneration. In Brazil there are more than 3 million people with this condition.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T		
ARMS2	rs10490924	GT+	T		
BCO1	rs6564851	TT+	G		
C2	rs547154	CC-	T		
C2	rs9332739	GG+	A,C		
C3	rs2230199	CG-	C,T		
C3	rs2230205	AG-	T		
CETP	rs5880	GG+	C		
CETP	rs5882	AG+	A		
CETP	rs708272	CT-	A		
CETP	rs1532624	TT-	A		
CETP	rs1864163	GG+	A		
CETP	rs2303790	AA+	G		
CFB	rs4151667	TT+	A		
CFH	rs800292	CT-	A		
CFH	rs1061147	CC+	C		
CFH	rs1061170	TT+	T		
CFH	rs1065489	GT+	T		
CFH	rs1329428	AG-	T		
CFH	rs3753394	CT+	T		
COL8A1	rs13081855	GG+	T		
CRYBB3	rs74315490	GG+			
CX3CR1	rs3732378	AG+	A		
CX3CR1	rs3732379	CT+	T		
EPHA2	rs3754334	CC-	A		
EPHA2	rs116506614	CC+			
HTRA1	rs11200638	AG+	A		
INTERGENIC	rs493258	AG-	C		
INTERGENIC	rs10468017	CC+	T		
INTERGENIC	rs12678919	AA+	G		

Name

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KL	rs9536314	TT+	A,G	- -	
MC1R	rs1805005	GG+	T	- -	
MC1R	rs1805007	CC+	T	- -	
MC1R	rs1805008	CC+	T	- -	
MC1R	rs1805009	GG+	A,C	- -	
NOTCH4	rs422951	AG-	C	- -	
PITX2	rs6533526	GG+	A	- -	
REST	rs1713985	AC-	T	- -	
REST	rs2227902	GG+	T	- -	
SERPINF1	rs1136287	CT+	T	+ -	
SKIV2L	rs429608	GG+	A	- -	
SKIV2L	rs2734331	TT-	G	- -	
SOD3	rs1799895	CC+	G	- -	
SOD3	rs2855262	TT+	C	- -	
TLR3	rs3775291	GG-	G,T	+ +	
VEGFA	rs3025039	CC+	T	- -	

Lycopene

MEDIUM

Lycopene is a carotenoid substance that gives the reddish color to tomatoes, watermelon, guava, among other foods. It is an antioxidant that, when absorbed by the body, helps prevent and repair cell damage caused by free radicals. Free radicals are produced during normal human body functions such as breathing and physical activity. They are also formed as a result of smoking, overexposure to the sun, air pollution and stress. They are highly reactive and, if left unchecked, can damage important molecules in the healthy cells of the human body. This can contribute to the development of various diseases such as cancer and cardiovascular disease.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BCO1	rs6564851	TT+	G	- -	
SCARB1	rs11057841	CC+	T	- -	
SETD7	rs7680948	TT-	T	- -	
SOD2	rs4880	CT-	G	+ -	

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Apigenin

MEDIUM

In recent years, a series of researches and studies have been carried out to prove the benefits of apigenin, a flavonoid found in parsley, thyme and chamomile, for example, with strong neurological effects and excellent antioxidant and anticancer properties.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ALDH2	rs671	GG+	A	+ +	
ATM	rs664143	CC-	G,T	- -	
BCO1	rs12934922	AA+	G,T	- -	
BDNF	rs6265	GG-	T	- -	
CAT	rs1001179	AA-	T	- -	
CDKN1A	rs1801270	CC+	A,T	- -	
CLPTM1L	rs401681	CT+	T	+ -	
CYP1A1	rs1048943	AA-	A,C,G	- -	
CYP1A1	rs1800031	TT-	G	- -	
CYP1A1	rs41279188	CC-	A,T	- -	
CYP1A1	rs56313657	GG-	A,T	- -	
CYP1A1	rs72547509	TT-	G,T	- -	
CYP1B1	rs1056836	CC-	C	- -	
CYP2E1	rs2070673	TT+	T	- -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A5	rs776746	AG-	C	+ -	
DIRC3	rs966423	CT+	G,T	+ -	
E2F3	rs1570155	AG+	A,T	+ -	
EPHX1	rs1051740	TT+	C	- -	
EPHX1	rs2234922	AG+	G,T	+ -	
FASLG	rs763110	TT+	T	- -	
G6PD	rs1050828	CC+	T	- -	
G6PD	rs1050829	AA-	C	- -	
GCLC	rs17883901	CC-	A,T	- -	
GPX1	rs1050450	CC-	A	- -	
GSTP1	rs1695	GG+	G	+ +	
MAOA	rs909525	GG-	T	+ +	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	

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MTHFR	rs1801133	CC-	A	- -	
MTRR	rs1801394	AA+	G	- -	
NAF1	rs7675998	GG+	G,T	- -	
NFE2L2	rs6706649	CC+	T	- -	
NFE2L2	rs6721961	GG+	C,G	- -	
NGF	rs6330	CC-	A	- -	
NQO1	rs1800566	CC-	A	- -	
PIK3CA	rs2699887	CT+	T	- -	
PIK3CA	rs104886003	GG+	A,C	- -	
PIK3CA	rs1057519942	GG+	A	- -	
PTEN	rs121909229	GG+	A,C,T	- -	
PTEN	rs121909232	CC+	G	- -	
RGS2	rs4606	CC+	G	+ +	
RNASEL	rs3738579	CT-	G	+ -	
SLC39A6	rs1050631	CT-	A	+ -	
SOD3	rs1799895	CC+	G	- -	
SOD3	rs2855262	TT+	C	- -	
TERT	rs2736098	AG-	T	+ -	
TPH2	rs4565946	CT+	A,G,T	- -	
TPH2	rs4570625	GT+	G	+ -	
XPC	rs2228000	CC-	A	- -	
XPC	rs2228001	AA-	T	- -	
XRCC1	rs1799782	CT-	A	+ -	

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Calcium

MEDIUM

Evaluation of a set of genes associated with calcium metabolism. Indication in orange or red indicates increased need for calcium.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CASR	rs13068893	CC+	G		
CYP24A1	rs1570669	AG+	G		
CYP24A1	rs2296241	GG+	A		
CYP24A1	rs4809957	AG+	G		
CYP24A1	rs6068816	CT+	T		
CYP2R1	rs10741657	GG+	G		
DGKH	rs1012053	AC+	A		
F13B	rs6003	AA-	T		
F2	rs1799963	GG+	A		
F5	rs4524	AG-	C		
F5	rs6025	GG-	T		
GATA3	rs4143094	GG+	G		
GC	rs4588	CC-	A,T		
GC	rs7041	GT-	G		
LPL	rs268	AA+	G		
MCM6	rs4988235	AG+	A		
SELE	rs5361	AC-	G		
TNFRSF11B	rs3134069	AA+	C		
VDR	rs731236	CT-	G		
VDR	rs1544410	AG-	C,T		
VDR	rs2228570	CC-	C,T		
VDR	rs4516035	CT+	C		
VDR	rs7975232	AC+	A		

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Molybdenum

NORMAL

Molybdenum deficiency is a nutritional deficiency rarely diagnosed in humans, as only 45 micrograms a day is enough for adults and can be found in many grains, vegetables and meats. Molybdenum aids in liver detoxification and works as a cofactor for three essential enzymes. Furthermore, molybdenum can regulate the metabolism of calcium, magnesium and copper and facilitate the utilization of iron. Molybdenum has also been associated with bone growth and a reduced risk of tooth decay. Some studies even link this mineral with a lower risk of stomach cancer and esophageal cancer. Excess is also rare, as it is quickly eliminated by the body and causes symptoms only when consumption is 10mg/day for a long period (1000 times more than necessary).

Gene	RSID	Genotype	Minor Allele	Alteration	Result
MOCS1	rs104893969	GG-	T		
MOCS1	rs104893970	CC-	T		
MOCS1	rs148579886	GG+	A		

Phosphorus

NORMAL

Need for phosphorus.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ALPL	rs1697421	GG-	T		
C12ORF4	rs2970818	TT+	A,C		
CSTA	rs17265703	AA+	G		
PDE7B	rs947583	TT+	C		
TKT	rs782092363	GG+	A		

Personal characteristics

Greater Stimulus with Caffeine

NORMAL

Individuals with this polymorphism are more stimulated with caffeine.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CYP1A2	rs762551	AC+	C		
MTNR1B	rs10830964	CC+	T		

Vitamins

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Vitamin D

HIGH

Vitamin D is the general name given to a group of fat-soluble compounds that are essential for maintaining the mineral balance in the body, and is also known as anti-rachitic and cholecalciferous vitamin D. Indication in orange or red indicates greater need.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T		
ABCB1	rs1128503	CT-	G		
ABCB1	rs3213619	TT-	G		
ACE	rs4343	AG+	A		
ACP7	rs472265	AA+	G		
ADCY5	rs11708067	AA+	G		
ADD1	rs4961	GT+	A,T		
ADD1	rs4963	CG+	G,T		
ADD2	rs3755351	CC-	T		
ADIPOQ	rs17366743	TT+	C		
ADRB2	rs1800888	CC+	T		
AGAP2	rs12368653	GG+	A,T		
AGT	rs699	CT-	G		
AGTR1	rs5186	AA+	C		
ALDH2	rs671	GG+	A		
APOB	rs676210	AG+	A,T		
APOB	rs1367117	GG+	A		
APOE	rs7412	TT+	T		
APOE4	rs429358	TT+	C		
ATM	rs664143	CC-	G,T		
ATP2B1	rs2681472	CT-	G		
ATP2B1	rs7965584	AG+	G		
B3GALT1	rs13020412	AA+	G		
BAG3	rs2234962	CT+	C		
BAG6	rs3117583	TT-	G		
BATF	rs2300603	TT+	C		
BCO1	rs12934922	AA+	G,T		
BRAP	rs3782886	AA-	C		
BTD	rs104893686	TT+	G		
BTD	rs104893687	CC+	T		

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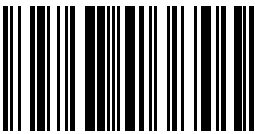
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Sample

C1ORF106	rs7522462	AG+	A	+ -	
CAPN10	rs3792267	GG+	A	- -	
CASZ1	rs880315	AA-	C	- -	
CBS	rs2851391	CT+	C	+ -	
CBS	rs5742905	TT-	G	- -	
CBS	rs28934891	GG-	T	- -	
CCL2	rs1024611	CT-	G	+ -	
CD58	rs12044852	CC+	A	- -	
CD86	rs1129055	GG+	A	- -	
CD86	rs9282641	GG+	A	- -	
CDH13	rs8055236	GG+	A,C,T	+ +	
CDKAL1	rs4712523	AG+	G	- -	
CDKAL1	rs7756992	AG+	G,T	- -	
CDKN1A	rs1801270	CC+	A,T	- -	
CDKN2A	rs3731249	GG-	A,G,T	- -	
CDKN2A	rs10811661	TT+	T	+ +	
CDKN2A/B	rs2383208	AA+	G,T	- -	
CDKN2B-AS1	rs1011970	GT+	T	- -	
CDKN2B-AS1	rs1063192	TT-	A,T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CDKN2B-AS1	rs10757272	TT+	T	+ +	
CDKN2B-AS1	rs10757274	GG+	G	+ +	
CETP	rs5882	AG+	A	+ -	
CETP	rs2303790	AA+	G	- -	
CFH	rs1061147	CC+	C	- -	
CHST12	rs6952809	CC+	C	- -	
CLPTM1L	rs401681	CT+	T	+ -	
CLSTN2	rs17411949	CC+	T	- -	
CYP1A1	rs1048943	AA-	A,C,G	- -	
CYP1A1	rs1800031	TT-	G	- -	
CYP1A1	rs41279188	CC-	A,T	- -	
CYP1A1	rs56313657	GG-	A,T	- -	
CYP1A1	rs72547509	TT-	G,T	- -	
CYP1B1	rs1056836	CC-	C	- -	
CYP24A1	rs2248359	CC+	T	- -	

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CYP24A1	rs2296241	GG+	A	- -	
CYP24A1	rs4809957	AG+	G	- -	
CYP24A1	rs6068812	AA+	G	- -	
CYP24A1	rs6068816	CT+	T	- -	
CYP27B1	rs10877012	TT+	C,T	- -	
CYP27B1	rs118204008	CC-	T	- -	
CYP27B1	rs118204010	CC-	G	+ +	
CYP27B1	rs118204012	AA-	G	- -	
CYP2E1	rs2070673	TT+	T	- -	
CYP2R1	rs2060793	GG+	G	- -	
CYP2R1	rs10741657	GG+	G	+ +	
CYP2R1	rs61495246	TT-	G	- -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A5	rs776746	AG-	C	+ -	
DAPK1	rs11141915	AC+	C	- -	
DBC1	rs10984447	AA+	G	+ +	
DEF8	rs4268748	CT+	C	- -	
DIRC3	rs966423	CT+	G,T	+ -	
DKKL1	rs2303759	TT+	G	- -	
DLEU1	rs2762051	CC+	T	- -	
DMD	rs1800278	AA-	C	- -	
DMD	rs1801187	GG-	T	- -	
DMD	rs104894788	GG-	T	- -	
DNAJC5B	rs13279522	TT+	C	- -	
DNER	rs1861612	AG+	A,C	- -	
DPYD	rs1801266	CC-	A	- -	
DPYD	rs1801267	GG-	T	- -	
DPYD	rs1801268	GG-	A	- -	
DSG2	rs2230234	AA+	G,T	- -	
E2F3	rs1570155	AG+	A,T	+ -	
EPHX1	rs1051740	TT+	C	- -	
EPHX1	rs2234922	AG+	G,T	+ -	
ERI1	rs96621	CT+	C	- -	
F12	rs1801020	CT-	G	+ -	
F7	rs6046	CT-	A	- -	

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FASLG	rs763110	TT+	T	- -	
FMN2	rs17672135	TT+	C	+ +	
FTO	rs1121980	CC-	A	- -	
G6PD	rs1050828	CC+	T	- -	
GAD1	rs701492	TT+	T	- -	
GAD1	rs2241165	AA-	T	- -	
GC	rs4588	CC-	A,T	- -	
GC	rs7041	GT-	G	+ -	
GC	rs1155563	TT+	C	- -	
GC	rs2282679	AA-	G	- -	
GCK	rs4607517	GG+	A,C	- -	
GCKR	rs780094	AG-	C	- -	
GPX1	rs1050450	CC-	A	- -	
GSTP1	rs1695	GG+	G	+ +	
HDAC4	rs3791406	CT+	C	+ -	
HHEX	rs5015480	TT+	T	- -	
HIVEP2	rs761993070	CC+	A,G,T	- -	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRA	rs61731956	GG+	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
HLA-DRB1	rs3135388	CC-	A	- -	
IFNL4	rs12979860	CC+	C	- -	
IGF2BP2	rs4402960	GG+	T	- -	
IL-2RA	rs2104286	AG-	C	- -	
IL-2RA	rs12722489	AG-	T	- -	
IL-4	rs2243250	CC+	T	+ +	
IL-6	rs1800795	CG+	G	- -	
IL-7R	rs6897932	CC+	T	+ +	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs751891	CC-	T	- -	
INTERGENIC	rs791595	AG+	G	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2119704	CC+	A	- -	
INTERGENIC	rs2383207	GG+	G	+ +	

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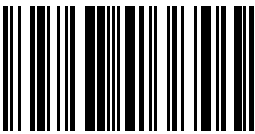
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INTERGENIC	rs2820037	AA+	T	- -	●
INTERGENIC	rs4728142	AG+	A	- -	●
INTERGENIC	rs7923837	AA+	A,T	- -	●
INTERGENIC	rs9287638	CC+	A	- -	●
INTERGENIC	rs10757278	GG+	G	+ +	●
INTERGENIC	rs12661968	TT+	C	- -	●
INTERGENIC	rs13192841	GG+	A	- -	●
IRF4	rs12203592	CC+	T	- -	●
IRS1	rs2943641	CT+	C	+ -	●
ITGA11	rs7174755	TT+	C,G	- -	●
ITGB3	rs5918	TT+	C	- -	●
JAZF1	rs1635852	CT+	C	- -	●
KCNE1	rs1805127	AG-	A,C,G	+ -	●
KCNE2	rs2234916	AA+	G	- -	●
KCNE3	rs2270676	CT-	G	- -	●
KCNJ11	rs5215	TT+	T	- -	●
KCNJ11	rs5219	CC+	T	- -	●
KCNQ1	rs2283228	AA+	C	- -	●
KCNQ1	rs104894252	GG+	A,C	- -	●
KL	rs9536314	TT+	A,G	- -	●
LAG3	rs870849	CT+	C	- -	●
LEPR	rs1137101	AA+	G	- -	●
LMNA	rs553016	GG-	G,T	- -	●
LRP8	rs5174	GG-	T	- -	●
MAOA	rs909525	GG-	T	+ +	●
MAOA	rs1137070	TT+	C	- -	●
MAOA	rs3027399	GG+	C	- -	●
MC1R	rs1805005	GG+	T	- -	●
MC1R	rs1805007	CC+	T	- -	●
MC1R	rs1805008	CC+	T	- -	●
MC1R	rs1805009	GG+	A,C	- -	●
MMP3	rs3025058	DI+	G	+ -	●
MOV10	rs2932538	CC-	C,G	- -	●
MPV17L2	rs874628	TT-	G,T	- -	●
MRAS	rs2306374	TT+	C	- -	●

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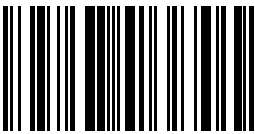
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MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
MTNR1B	rs10830963	CC+	G	- -	
MTRR	rs1801394	AA+	G	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NADSYN1	rs12785878	GG+	G	+ +	
NAF1	rs7675998	GG+	G,T	- -	
NEDD4L	rs2288774	CT+	A,C	- -	
NEDD4L	rs3865418	CC+	C	- -	
NEDD4L	rs4149601	AA+	A	- -	
NFE2L2	rs6721961	GG+	C,G	- -	
NFE2L2	rs35652124	CT+	C	- -	
NGF	rs6330	CC-	A	- -	
NGF	rs11466112	CC-	A	- -	
NOS3	rs1799983	GG+	T	- -	
NOS3	rs1800779	AA+	G	- -	
NOV	rs2071518	CC+	T	- -	
NPPA	rs5065	AA+	G	- -	
OPRM1	rs1799971	GG+	G	+ +	
PAX4	rs2233580	GG-	T	- -	
PCK1	rs8192708	AG+	G	+ -	
PEX5L	rs7630877	GG+	A,C	- -	
PHACTR1	rs9349379	AA+	A	- -	
PIK3CA	rs2699887	CT+	T	- -	
PIK3CA	rs104886003	GG+	A,C	- -	
PIK3CA	rs1057519942	GG+	A	- -	
PLPP3	rs17114036	AA+	G	- -	
PPARG	rs1801282	CG+	C	+ -	
PPARG	rs17036170	GG+	A	- -	
PPARGC1A	rs8192678	GG-	T	- -	

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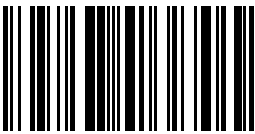
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PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
PTEN	rs121909229	GG+	A,C,T	- -	
PTEN	rs121909232	CC+	G	- -	
PTH	rs6256	AC-	A,T	+ -	
RASGRP1	rs7403531	CC+	C,G	- -	
RHOU	rs6426514	GG+	A	- -	
RNASEL	rs3738579	CT-	G	+ -	
RPS6KB1	rs630923	CC+	A	- -	
RPSAP52	rs1531343	CC+	C,T	- -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	
SDHAF4	rs1048886	AA+	G	- -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SHMT1	rs1979277	AG+	A	- -	
SLC30A7	rs11581062	AA+	G	- -	
SLC30A8	rs13266634	CC+	A,T	+ +	
SLC39A6	rs1050631	CT-	A	+ -	
SLC45A2	rs185146	CT+	T	+ -	
SMAD3	rs17228212	TT+	C	- -	
SOD2	rs4880	CT-	G	+ -	
STAT4	rs10181656	CG+	C	+ -	
STK39	rs6749447	GT+	G	+ -	
TAP2	rs241428	AA-	A,C,G	- -	
TAP2	rs1800454	GG-	T	- -	
TCF7L2	rs7901695	TT+	C	- -	
TCF7L2	rs7903146	CC+	G,T	- -	
TCF7L2	rs12255372	GG+	T	- -	
TERT	rs2736098	AG-	T	+ -	
TERT	rs2736100	TT-	A	+ +	
TGFBR3	rs1805110	CC-	A	- -	
THADA	rs7578597	TT+	C	- -	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	

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TNF	rs1800629	GG+	A	- -	
TNFSF14	rs344560	GG-	C	- -	
TNFSF14	rs2291667	CC-	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TRIB3	rs2295490	AG+	G,T	+ -	
TRPM6	rs11144134	CT+	C	+ -	
TTN	rs2244492	GG-	T	- -	
TXNRD2	rs5748469	AA+	A	- -	
UBE2E2	rs7612463	AC+	A,G	- -	
VDR	rs731236	CT-	G	+ -	
VDR	rs1544410	AG-	C,T	+ -	
VDR	rs2228570	CC-	C,T	- -	
VDR	rs7975232	AC+	A	+ -	
VPS26A	rs4812829	AG+	A	- -	
WSCD2	rs9739493	CC+	C,G	- -	
XPC	rs2228000	CC-	A	- -	
XPC	rs2228001	AA-	T	- -	
XRCC1	rs1799782	CT-	A	+ -	
ZNF767P	rs354033	CC-	A	- -	

Vitamin B3 (Niacin)

HIGH

Niacin (nicotinic acid, vitamin B3) was considered a promising candidate to prevent cardiovascular disease because it is known to lower cholesterol in the blood, which is one of the main risk factors. Therefore, long-term therapy with niacin was assumed to reduce the risk of heart attack, and stroke. It's also important for maintaining the balance of the skin and nervous system. It is also relevant to the proper functioning of the digestive system.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BST1	rs4698412	AA+	A	+ +	
GAD1	rs2241165	AA-	T	- -	
NAMPT	rs61330082	CC-	A	- -	
SIRT1	rs12778366	TT+	C	+ +	
SIRT3	rs511744	CC+	T	+ +	
SIRT6	rs352493	TT+	C	+ +	

Name

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Vitamin E

HIGH

Vitamin E is an important vitamin that helps regulate cholesterol, improve skin and hair health, and has an antioxidant action. Indication in orange or red indicates greater need.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
A2M	rs669	AA-	C	- -	
ABCA7	rs3764650	TT+	G	- -	
ABCA7	rs115550680	AA+	G	- -	
ACE	rs4343	AG+	A	+ -	
ADD1	rs4961	GT+	A,T	+ -	
ADRB2	rs1800888	CC+	T	- -	
AGAP2	rs12368653	GG+	A,T	- -	
APOA5	rs12272004	CC+	A	+ +	
APOC1	rs4420638	AA+	G	- -	
APOE	rs7412	TT+	T	+ +	
APOE4	rs429358	TT+	C	- -	
ARHGAP20	rs326946	TT-	C	- -	
ATP2B1	rs2681472	CT-	G	- -	
BAG3	rs2234962	CT+	C	- -	
BATF	rs2300603	TT+	C	- -	
BDNF	rs6265	GG-	T	- -	
BIN1	rs744373	CT-	G	+ -	
BRAP	rs3782886	AA-	C	- -	
BTD	rs104893686	TT+	G	- -	
BTD	rs104893687	CC+	T	- -	
C1ORF106	rs7522462	AG+	A	+ -	
CASC17	rs1859962	GG+	T	+ +	
CASC21	rs16902104	CC+	G,T	- -	
CASC8	rs1447295	CC+	C,T	- -	
CASC8	rs6983267	GG+	T	+ +	
CCL2	rs1024611	CT-	G	+ -	
CD2AP	rs9349407	GG+	C	- -	
CD2AP	rs10948363	AA+	G	- -	
CD58	rs12044852	CC+	A	- -	
CD86	rs1129055	GG+	A	- -	

Name

Sample

Age

Gender

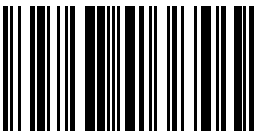
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CD86	rs9282641	GG+	A	- -	
CDH1	rs16260	AC+	A	+ -	
CDH13	rs8055236	GG+	A,C,T	+ +	
CDKN1B	rs34330	CT+	C	+ -	
CDKN2B-AS1	rs1011970	GT+	T	- -	
CDKN2B-AS1	rs1063192	TT-	A,T	- -	
CDKN2B-AS1	rs10116277	TT+	T	- -	
CDKN2B-AS1	rs10757272	TT+	T	+ +	
CDKN2B-AS1	rs10757274	GG+	G	+ +	
CETP	rs5882	AG+	A	+ -	
CETP	rs2303790	AA+	G	- -	
CFH	rs1061170	TT+	T	- -	
CHAT	rs733722	CC+	A,G,T	- -	
CHEK2	rs17879961	TT-	C,G	- -	
CHST12	rs6952809	CC+	C	- -	
CLSTN2	rs17411949	CC+	T	- -	
CLU	rs11136000	CC+	C	- -	
COMT	rs4680	AG+	A	+ -	
CPS1	rs1047891	CC+	A	- -	
CR1	rs3818361	CC-	G	- -	
CR1	rs6656401	GG+	G,T	- -	
CYP24A1	rs2296241	GG+	A	- -	
CYP24A1	rs4809957	AG+	G	- -	
CYP24A1	rs6068816	CT+	T	- -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A4	rs4646438	---		- -	
CYP3A4	rs55785340	AA+	G	- -	
CYP4F2	rs2108622	CC+	T	- -	
DAB2IP	rs1571801	AC-	T	- -	
DBC1	rs10984447	AA+	G	+ +	
DKKL1	rs2303759	TT+	G	- -	
DLEU1	rs2762051	CC+	T	- -	
DMD	rs1800278	AA-	C	- -	
DMD	rs1801187	GG-	T	- -	
DMD	rs104894788	GG-	T	- -	

Name

Sample

Age

Gender

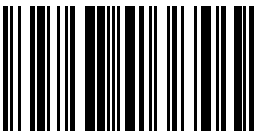
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DNAJC5B	rs13279522	TT+	C	- -	
DSG2	rs2230234	AA+	G,T	- -	
ELAC2	rs4792311	GG+	A,C	- -	
F12	rs1801020	CT-	G	+ -	
F7	rs6046	CT-	A	- -	
FGFR4	rs351855	CC-	A	- -	
FLJ10986	rs1470407	CT+	C	- -	
FMN2	rs17672135	TT+	C	+ +	
FRMD4A	rs10906466	AG+	C,G	- -	
GAB2	rs2373115	GG-	A	- -	
GCKR	rs1260326	CT+	C	+ -	
GOLM1	rs7019241	CT+	G,T	- -	
GOLM1	rs10868366	GT+	T	- -	
GPX1	rs1050450	CC-	A	- -	
GSTP1	rs1695	GG+	G	+ +	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRA	rs61731956	GG+	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
HLA-DRB1	rs3135388	CC-	A	- -	
HTRA1	rs11200638	AG+	A	+ -	
IL-10	rs1800896	AG-	C	+ -	
IL-2RA	rs2104286	AG-	C	- -	
IL-2RA	rs12722489	AG-	T	- -	
IL-4	rs2243250	CC+	T	- -	
IL-6	rs1800795	CG+	G	- -	
IL-7R	rs6897932	CC+	T	+ +	
INTERGENIC	rs501120	AG-	C	+ -	
INTERGENIC	rs1333049	CC+	C	+ +	
INTERGENIC	rs2119704	CC+	A	- -	
INTERGENIC	rs2383207	GG+	G	+ +	
INTERGENIC	rs2836061	CT+	T	+ -	
INTERGENIC	rs4728142	AG+	A	- -	
INTERGENIC	rs5945572	AG+	G	+ -	
INTERGENIC	rs7965399	TT+	A,C	- -	
INTERGENIC	rs10260404	CT+	C	+ -	

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INTERGENIC	rs10505483	AG-	T	+ -	
INTERGENIC	rs10757278	GG+	G	+ +	
INTERGENIC	rs10896449	AA+	G	- -	
INTERGENIC	rs12473579	GG+	A	- -	
INTERGENIC	rs13192841	GG+	A	- -	
INTERGENIC	rs16901979	AC+	A	+ -	
ITGA2	rs1126643	CC+	T	- -	
ITGB3	rs5918	TT+	C	- -	
JAZF1	rs10486567	AG+	A	+ -	
KCNE1	rs1805127	AG-	A,C,G	+ -	
KCNE2	rs2234916	AA+	G	- -	
KCNE3	rs2270676	CT-	G	- -	
KL	rs9536314	TT+	A,G	- -	
KLF6	rs3750861	CC+	T	- -	
LAG3	rs870849	CT+	C	- -	
LDLR	rs688	CC+	T	- -	
LRP6	rs2160525	AG+	G	- -	
LRP8	rs5174	GG-	T	- -	
LTA	rs1799724	CT+	T	+ -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MMP3	rs3025058	DI+	G	+ -	
MPO	rs2333227	TT+	T	- -	
MPV17L2	rs874628	TT-	G,T	- -	
MRAS	rs2306374	TT+	C	- -	
MS4A6A	rs610932	CC-	G	- -	
MSMB	rs10993994	AA-	G	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1L	rs6922269	AG+	A	+ -	
MTHFD1L	rs11754661	GG+	A,T	- -	
MTHFD1L	rs17349743	TT+	C	- -	
MYBPC3	rs11570112	CC-	A,C	- -	
NAF1	rs7675998	GG+	G,T	- -	
NKAIN3	rs7834588	CT+	T	+ -	

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Gender

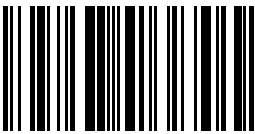
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NOS3	rs1800779	AA+	G	- -	
NPPA	rs5065	AA+	G	- -	
PCAT19	rs11672691	AA+	T	- -	
PCDH11X	rs5984894	AA+	G	- -	
PCK1	rs8192708	AG+	G	+ -	
PHACTR1	rs9349379	AA+	A	- -	
PICALM	rs3851179	AG-	C	+ -	
PICALM	rs10792832	AG+	G	+ -	
PLAU	rs2227562	GG+	A	- -	
PLAU	rs2227564	TT+	C	- -	
PLD3	rs145999145	GG+	A	- -	
PLPP3	rs17114036	AA+	G	- -	
POLN	rs1923775	TT+	T	- -	
PPP1R3B	rs3748140	GG-	T	- -	
PPP1R3B	rs9987289	GG+	G	- -	
PRRC2C	rs2421847	AA+	G	- -	
PSEN1	rs63749824	CC+	G,T	- -	
PSEN2	rs63750197	CC+	T	- -	
PSMA6	rs1048990	CG+	G,T	- -	
PSRC1	rs599839	AA+	A,C	- -	
RNASEL	rs3738579	CT-	G	+ -	
RPS6KB1	rs630923	CC+	A	- -	
RYR2	rs34967813	AA+	G	- -	
SCN5A	rs1805124	GG-	T	- -	
SH2B3	rs3184504	CC+	A,C,G	- -	
SLC30A7	rs11581062	AA+	G	- -	
SMAD3	rs17228212	TT+	C	- -	
SOD3	rs1799895	CC+	G	- -	
SOD3	rs2855262	TT+	C	- -	
TCF2	rs4430796	AG+	G	+ -	
TCF7L2	rs12255372	GG+	T	- -	
TLR4	rs4986790	AA+	G,T	- -	
TLR4	rs4986791	CC+	T	- -	
TMPO	rs17028450	CC+	T	- -	
TMPRSS2	rs12329760	CT+	T	- -	

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TNF	rs1800629	GG+	A	- -	
TNFSF14	rs344560	GG-	C	- -	
TNFSF14	rs2291667	CC-	A	- -	
TNFSF4	rs1234313	AG+	G	+ -	
TNFSF4	rs3861950	TT+	C	- -	
TREM2	rs75932628	CC+	A,T	- -	
TTN	rs2244492	GG-	T	- -	
TTPA	rs121917850	GG-	T	- -	
TTPA	rs121917851	CC-	A	- -	
TXNRD2	rs5748469	AA+	A	- -	
XRCC1	rs25489	GG-	G,T	- -	
ZNF767P	rs354033	CC-	A	- -	
ZNF827	rs13149290	TT+	T	- -	
ZPR1	rs964184	CC+	C	- -	

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Vitamin B5 (Pantothenic Acid)

HIGH

Vitamin B5, also called pantothenic acid, performs functions in the body such as producing cholesterol, hormones and red blood cells, which are the cells that carry oxygen in the blood. This vitamin can be found in foods such as fresh meat, cauliflower, broccoli, whole grains, eggs and milk, and its deficiency can cause symptoms such as tiredness, depression and frequent irritation. Some benefits: Produce energy and maintain the proper functioning of the metabolism; Maintain adequate production of hormones and vitamin D; Decrease tiredness and fatigue; Favor the healing of wounds and surgeries; Reduce high cholesterol and triglycerides; Help control symptoms of rheumatoid arthritis.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T		
ABCG8	rs6544713	CC+	C		
ANXA3	rs2867461	AG+	G,T		
APOA5	rs2266788	TT-	A		
APOA5	rs3135506	GG+	C		
APOC1	rs4420638	AA+	G		
APOE	rs7412	TT+	T		
AR	rs5031002	GG+	A		
BRCA2	rs4942486	CT+	C		
C5	rs10985112	GG+	A		
CPS1	rs1047891	CC+	A		
CR1L	rs4844614	GT+	T		
CTLA4	rs3087243	AG+	G		
DNAH11	rs12670798	TT+	C		
DOCK7	rs10889353	AC+	C,T		
EOMES	rs3806624	CT-	G		
FABP2	rs1799883	GG-	A,C,G		
FADS1	rs174547	TT+	C		
FADS2	rs174570	CC+	T		
FCRL3	rs7528684	AG+	G		
GCKR	rs1260326	CT+	C		
GPX1	rs1050450	CC-	A		
GUCY1B2	rs3790022	CC-	A		
HLA-DRB1	rs660895	GG+	G		
HLA-DRB1	rs6457617	TT+	A,T		
HTR2A	rs6314	CC-	A		
HTR2A	rs1328674	AG-	C,G		

Name

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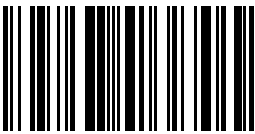
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Sample

HYKK	rs8034191	TT+	C	- -	
ICAM3	rs2304240	AG+	G	- -	
IL-2RA	rs2104286	AG-	C	+ -	
IL-2RB	rs743777	AG+	G	- -	
INTERGENIC	rs2327832	AG+	G	+ -	
INTERGENIC	rs2837960	GT+	A,G	+ -	
INTERGENIC	rs2872507	AG+	A	+ -	
INTERGENIC	rs6920220	AG+	A	+ -	
INTERGENIC	rs11761231	CT+	C	- -	
INTERGENIC	rs13192841	GG+	A	- -	
ITGAV	rs3738919	AA+	A	- -	
KIAA1109	rs6822844	GT+	T	- -	
KIAA1109	rs13119723	GG+	G	+ +	
LDLR	rs6511720	GG+	T	- -	
LPL	rs285	CT+	T	- -	
LPL	rs320	GT+	G	+ -	
LPL	rs13702	AG-	A,C	+ -	
MAT1A	rs118204001	TT-	C	- -	
NAF1	rs7675998	GG+	G,T	- -	
NFKBIE	rs2233434	TT-	G	- -	
NOD2	rs2066845	GG+	C,T	- -	
OR4A46P	rs7395662	GG+	A	- -	
PADI4	rs2240340	AG-	C	+ -	
PADI4	rs11203366	AG+	A	- -	
PCIF1	rs7679	TT+	C	- -	
PHTF1	rs6679677	CC+	A	- -	
PLD4	rs2841277	CT+	T	- -	
PSMA4	rs12901682	CC+	C,T	- -	
PTPN2	rs1893217	CC-	G	+ +	
PTPN2	rs2542151	GG+	T	+ +	
PTPN22	rs2476601	GG+	G	- -	
RAB11B	rs2967605	GG-	T	- -	
SLC6A11	rs1809529	CT+	T	- -	
STAT4	rs7574865	GT+	G	+ -	
STAT4	rs10181656	CG+	C	+ -	

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TMEM241	rs9949617	CC+	T	- -	
TNF	rs1800610	CT-	A	- -	
TRAF1/C5	rs3761847	AA+	A	- -	
UBASH3A	rs11203203	AG+	A	+ -	
VAR2	rs4678	CC-	A	- -	
WDFY4	rs877819	AG+	G	- -	
ZNF175	rs1543922	CC+	T	- -	
ZPR1	rs964184	CC+	C	- -	



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Vitamin B6

HIGH

Pyridoxine promotes cell respiration and helps in protein metabolism, in addition to helping to reduce fluid retention. Indication in orange or red indicates greater need.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T		
ABCB1	rs1128503	CT-	G		
ABCB1	rs2032583	TT-	G		
ABCB1	rs2235015	GG-	A,T		
ABCB1	rs2235040	GG-	A,G,T		
ABCB1	rs2235067	GG-	T		
ABCB1	rs3213619	TT-	G		
ABCB1	rs4148739	AA-	C		
ABCB1	rs10248420	AA+	G,T		
ABCB1	rs11983225	TT+	C		
ADA	rs73598374	GG-	A,G,T		
ALPL	rs1256335	TT-	G		
ALPL	rs1697421	GG-	T		
ARMS2	rs10490924	GT+	T		
BDNF	rs6265	GG-	T		
C2	rs547154	CC-	T		
C2	rs9332739	GG+	A,C		
C3	rs2230199	CG-	C,T		
C3	rs2230205	AG-	T		
CBS	rs2851391	CT+	C		
CBS	rs5742905	TT-	G		
CBS	rs28934891	GG-	T		
CBS	rs121964972	CC-	A		
CETP	rs5880	GG+	C		
CETP	rs5882	AG+	A		
CETP	rs708272	CT-	A		
CETP	rs1532624	TT-	A		
CETP	rs1864163	GG+	A		
CETP	rs2303790	AA+	G		
CFB	rs4151667	TT+	A		

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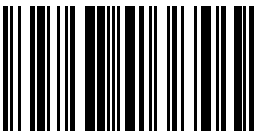
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Sample

CFH	rs800292	CT-	A	+ -	
CFH	rs1061147	CC+	C	- -	
CFH	rs1061170	TT+	T	- -	
CFH	rs1065489	GT+	T	- -	
CFH	rs1329428	AG-	T	- -	
CFH	rs3753394	CT+	T	- -	
CHRM2	rs324650	AT+	A	+ -	
CHRM2	rs1824024	GT-	A	+ -	
CHRM2	rs2061174	CT-	A,C	- -	
CLOCK	rs1801260	AA+	C,G,T	- -	
COL8A1	rs13081855	GG+	T	- -	
COMT	rs4680	AG+	A	- -	
CRYBB3	rs74315490	GG+		- -	
CX3CR1	rs3732378	AG+	A	+ -	
CX3CR1	rs3732379	CT+	T	- -	
DTNBP1	rs2619522	GT-	C	- -	
EPHA2	rs3754334	CC-	A	- -	
EPHA2	rs116506614	CC+		- -	
FKBP5	rs1360780	CC+	A,C	- -	
GAD1	rs701492	TT+	T	- -	
GAD1	rs2241165	AA-	T	- -	
GPHN	rs104894470	CC+	T	- -	
GRIA3	rs687577	CC+	C	+ +	
GRIA3	rs3848874	GG+	A,T	- -	
HTR2A	rs6314	CC-	A	+ +	
HTR2A	rs1328674	AG-	C,G	- -	
HTR2C	rs3813929	CC+	G,T	- -	
HTRA1	rs11200638	AG+	A	+ -	
IL-1B	rs16944	AG+	G	+ -	
INTERGENIC	rs493258	AG-	C	+ -	
INTERGENIC	rs1545843	AG+	A	+ -	
INTERGENIC	rs10468017	CC+	T	- -	
INTERGENIC	rs12678919	AA+	G	- -	
KIAA0319	rs761100	TT-	C	- -	
KIAA0319	rs4504469	CC+	G,T	- -	

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MAOA	rs909525	GG-	T	+ +	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
MTRR	rs1801394	AA+	G	- -	
NBPF3	rs4654748	CT+	T	+ -	
NOTCH4	rs422951	AG-	C	- -	
OXTR	rs237899	GG+	A,C	- -	
OXTR	rs2254298	GG+	A	- -	
PITX2	rs6533526	GG+	A	- -	
REST	rs1713985	AC-	T	- -	
REST	rs2227902	GG+	T	- -	
SERPINF1	rs1136287	CT+	T	+ -	
SKIV2L	rs429608	GG+	A	- -	
SKIV2L	rs2734331	TT-	G	- -	
SOD2	rs4880	CT-	G	- -	
TDP2	rs2143340	TT-	G,T	- -	
TLR3	rs3775291	GG-	G,T	+ +	
TPH1	rs1799913	AC-	A,T	- -	
VEGFA	rs3025039	CC+	T	- -	

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Vitamin B1 (Thiamine)

HIGH

Vitamin B1, thiamin, or thiamine, enables the body to use carbohydrates as energy. It is essential for glucose metabolism, and it plays a key role in nerve, muscle, and heart function. Vitamin B1 helps the cells in the body convert food into energy. If you do not have enough vitamin B1 this process cannot work properly. You may have symptoms such as tiredness, loss of appetite and muscle weakness. Taking man-made thiamine helps restore normal levels of vitamin B1 in your body. Vitamin B1, or thiamin, helps prevent complications in the nervous system, brain, muscles, heart, stomach, and intestines. It is also involved in the flow of electrolytes into and out of muscle and nerve cells. It helps prevent diseases such as beriberi, which involves disorders of the heart, nerves, and digestive system. Patients who may receive thiamin to treat low levels of vitamin B1 include those with peripheral neuritis, which is an inflammation of the nerves outside the brain, or pellagra.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
PNPLA3	rs738409	GG-	G		
SLC19A2	rs28937595	GG-	A		
SLC19A2	rs74315374	GG-	A		
SLC19A2	rs121908540	CC-	T		
SLC19A3	rs121917882	GG-	A		
SLC35F3	rs34032258	CC+	G		
TPK1	rs371271054	TT+	C		

Beta carotene

HIGH

Beta-carotene is a carotenoid. Carotenoids are natural pigments found in plants and responsible for the vibrant colors of some fruits and vegetables, such as the orange color of carrots, the red of persimmons, and the intense yellow color of mangoes. Once ingested, beta-carotene can be converted to vitamin A (retinol) or act as an antioxidant to help protect cells from the harmful effects of free radicals. 50% of the vitamin A in the body comes from ingesting beta-carotene, which is why it is called "pro-vitamin A", meaning beta-carotene is a precursor for the production of vitamin A in the body. In addition to its antioxidant action, beta-carotene helps maintain healthy skin and also plays a vital role in eye health, reducing the risk of coronary heart disease, stroke, macular degeneration and other age-related illnesses. Due to its antioxidant action, beta-carotene strengthens the immune system, which contributes to the proper functioning of the lungs and respiratory system in general, helping to prevent colds and flu. Orange or red result indicates higher levels of beta-carotene. Results in red is beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BCO1	rs6564851	TT+	G		
BCO1	rs119478057	CC+	T		

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Vitamin K

HIGH

Vitamin K refers to structurally similar, fat-soluble vitamers found in foods and marketed as dietary supplements. The human body requires vitamin K for post-synthesis modification of certain proteins that are required for blood coagulation or for controlling binding of calcium in bones and other tissues. It's a group of fat-soluble vitamins that play a role in blood clotting, bone metabolism, and regulating blood calcium levels. The body needs vitamin K to produce prothrombin, a protein and clotting factor that is important in blood clotting and bone metabolism. People who use blood-thinning medications, such as warfarin, or Coumadin, should not start consuming additional vitamin K without first asking a doctor.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ACE	rs4343	AG+	A	+ -	
ADD1	rs4961	GT+	A,T	+ -	
ADD1	rs4963	CG+	G,T	- -	
ADD2	rs3755351	CC-	T	- -	
AGT	rs699	CT-	G	+ -	
AGTR1	rs5186	AA+	C	- -	
ARMS2	rs10490924	GT+	T	+ -	
ATP2B1	rs7965584	AG+	G	- -	
BAG6	rs3117583	TT-	G	- -	
C2	rs547154	CC-	T	- -	
C2	rs9332739	GG+	A,C	- -	
C3	rs2230199	CG-	C,T	+ -	
C3	rs2230205	AG-	T	- -	
CASZ1	rs880315	AA-	C	- -	
CBS	rs2851391	CT+	C	+ -	
CBS	rs5742905	TT-	G	- -	
CBS	rs28934891	GG-	T	- -	
CETP	rs5880	GG+	C	- -	
CETP	rs5882	AG+	A	+ -	
CETP	rs708272	CT-	A	+ -	
CETP	rs1532624	TT-	A	- -	
CETP	rs1864163	GG+	A	- -	
CETP	rs2303790	AA+	G	- -	
CFB	rs4151667	TT+	A	- -	
CFH	rs800292	CT-	A	+ -	
CFH	rs1061147	CC+	C	- -	

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CFH	rs1061170	TT+	T	- -	
CFH	rs1065489	GT+	T	- -	
CFH	rs1329428	AG-	T	- -	
CFH	rs3753394	CT+	T	- -	
COL8A1	rs13081855	GG+	T	- -	
CX3CR1	rs3732378	AG+	A	+ -	
CX3CR1	rs3732379	CT+	T	- -	
CYP4F2	rs2108622	CC+	T	- -	
DAPK1	rs11141915	AC+	C	- -	
FDPS	rs2297480	AC-	G	+ -	
GGCX	rs11676382	CC+	G	- -	
GPX1	rs1050450	CC-	A	- -	
HIVEP2	rs761993070	CC+	A,G,T	- -	
HTRA1	rs11200638	AG+	A	+ -	
IL-1B	rs16944	AG+	G	+ -	
INTERGENIC	rs493258	AG-	C	+ -	
INTERGENIC	rs751891	CC-	T	- -	
INTERGENIC	rs2820037	AA+	T	- -	
INTERGENIC	rs10468017	CC+	T	- -	
INTERGENIC	rs12678919	AA+	G	- -	
ITGA11	rs7174755	TT+	C,G	- -	
LRP5	rs3736228	CT+	T	+ -	
LRP5	rs4988321	CT-	A,C	- -	
MAOA	rs909525	GG-	T	+ +	
MAOA	rs1137070	TT+	C	- -	
MAOA	rs3027399	GG+	C	- -	
MOV10	rs2932538	CC-	C,G	- -	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
MTRR	rs1801394	AA+	G	- -	
NEDD4L	rs2288774	CT+	A,C	- -	
NEDD4L	rs3865418	CC+	C	- -	
NEDD4L	rs4149601	AA+	A	- -	
NFE2L2	rs6721961	GG+	C,G	- -	

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NFE2L2	rs35652124	CT+	C	- -	
NGF	rs6330	CC-	A	- -	
NGF	rs11466112	CC-	A	- -	
NOS3	rs1799983	GG+	T	- -	
NOS3	rs1800779	AA+	G	- -	
NOTCH4	rs422951	AG-	C	- -	
NOV	rs2071518	CC+	T	- -	
OPRM1	rs1799971	GG+	G	+ +	
PPARGC1A	rs8192678	GG-	T	- -	
REST	rs1713985	AC-	T	- -	
REST	rs2227902	GG+	T	- -	
SERPINF1	rs1136287	CT+	T	+ -	
SHMT1	rs1979277	AG+	A	- -	
SKIV2L	rs429608	GG+	A	- -	
SKIV2L	rs2734331	TT-	G	- -	
STK39	rs6749447	GT+	G	+ -	
TAP2	rs241428	AA-	A,C,G	- -	
TAP2	rs1800454	GG-	T	- -	
TLR3	rs3775291	GG-	G,T	+ +	
TRPM6	rs11144134	CT+	C	+ -	
VDR	rs7975232	AC+	A	+ -	
VEGFA	rs3025039	CC+	T	- -	
VKORC1	rs9923231	CC+	A,G,T	- -	
WNT16	rs2707466	GG-	G,T	+ +	
WSCD2	rs9739493	CC+	C,G	- -	

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Vitamin B9 (Folic Acid)

 MEDIUM-HIGH

Folic acid, folacin, pteroyl-L-glutamic acid or Vitamin B9, is a water-soluble vitamin belonging to the B complex for the formation of structural proteins and hemoglobin. Folic acid is effective in treating certain anemias; It is one of the essential components for a healthy pregnancy; Reduces risk of Alzheimer's disease; It can help prevent heart disease and stroke; It can help prevent anencephaly of fetuses in pregnancy; Helps control hypertension; Hair and Nail Loss; Improves blood insulin levels; Reduces hearing loss in the elderly.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCB1	rs1128503	CT-	G	- -	
ABCB1	rs2032583	TT-	G	+ +	
ABCB1	rs2235015	GG-	A,T	+ +	
ABCB1	rs2235040	GG-	A,G,T	+ +	
ABCB1	rs2235067	GG-	T	+ +	
ABCB1	rs3213619	TT-	G	- -	
ABCB1	rs4148739	AA-	C	+ +	
ABCB1	rs10248420	AA+	G,T	+ +	
ABCB1	rs11983225	TT+	C	+ +	
ADA	rs73598374	GG-	A,G,T	- -	
BDNF	rs6265	GG-	T	- -	
BTNL2	rs2076530	AG-	C	+ -	
CBS	rs234706	GG+	A	- -	
CBS	rs28934891	GG-	T	- -	
CHRM2	rs324650	AT+	A	+ -	
CHRM2	rs1824024	GT-	A	+ -	
CHRM2	rs2061174	CT-	A,C	- -	
CLOCK	rs1801260	AA+	C,G,T	- -	
CTLA4	rs231775	AG+	G	+ -	
CYP24A1	rs2296241	GG+	A	- -	
DPYD	rs1801266	CC-	A	- -	
DPYD	rs1801267	GG-	T	- -	
DPYD	rs1801268	GG-	A	- -	
FKBP5	rs1360780	CC+	A,C	- -	
FOLR3	rs7925545	AA+	G	- -	
GPHN	rs104894470	CC+	T	- -	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	

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HTR2A	rs6314	CC-	A	+ +	
HTR2A	rs1328674	AG-	C,G	- -	
HTR2C	rs3813929	CC+	G,T	- -	
IKZF4	rs10876864	AA+	A	- -	
IL-1B	rs16944	AG+	G	+ -	
INS	rs689	AT-	A	- -	
INTERGENIC	rs1417210	CT-	A,C	- -	
INTERGENIC	rs1545843	AG+	A	+ -	
LPP	rs1152846	AG-	C	+ -	
MAOA	rs909525	GG-	T	+ +	
MGMT	rs2308327	AA+	G	- -	
MTHFD1	rs1076991	AG-	C,G	+ -	
MTHFD1	rs2236225	CC-	A	- -	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
MTR	rs1805087	GG+	G	- -	
MTRR	rs1801394	AA+	G	- -	
MYT1L	rs869320675	GG-	T	- -	
NGF	rs6330	CC-	A	- -	
OXTR	rs237899	GG+	A,C	- -	
OXTR	rs2254298	GG+	A	- -	
RGS2	rs4606	CC+	G	+ +	
RPGRIP1L	rs61747071	CC+	T	- -	
RPGRIP1L	rs121918197	AA-	A,G	- -	
STAT4	rs10181656	CG+	C	+ -	
TCN2	rs1801198	GG+	A,C	- -	
TICAM1	rs2292151	CT-	A	- -	
TPH1	rs1799913	AC-	A,T	- -	
TPH2	rs4565946	CT+	A,G,T	- -	
TPH2	rs4570625	GT+	G	+ -	

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Vitamin B12

 MEDIUM-HIGH

Cobalamin, also known as vitamin B12, is required for erythropoiesis, amino acid and nucleic acid metabolism, and many other cellular functions. Indication in orange or red indicates greater need.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CBS	rs2851391	CT+	C		
CBS	rs28934891	GG-	T		
CLYBL	rs41281112	CC+	T		
CPS1	rs1047891	CC+	A		
CUBN	rs1801222	CT-	A		
CUBN	rs11254363	AG+	G		
CUBN	rs121434430	CC-	A		
FUT2	rs281377	CT+	T		
FUT2	rs516246	AG-	T		
FUT2	rs601338	AG+	A		
FUT2	rs602662	AG+	G		
FUT2	rs1800022	CC+	T		
FUT2	rs16982241	GG+	A		
MTHFR	rs1476413	AG-	G,T		
MTHFR	rs1801131	AC-	G		
MTHFR	rs1801133	CC-	A		
MTR	rs1805087	GG+	G		
MTRR	rs1801394	AA+	G		
MTRR	rs1802059	GG+	A		
NBPF3	rs4654748	CT+	T		
SLC19A1	rs1051266	GG-	C,G		
TCN1	rs526934	AA+	A		
TCN2	rs1801198	GG+	A,C		
TCN2	rs9606756	AA+	G		

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Vitamin B7 (Biotin)

 MEDIUM-HIGH

Vitamin B7 (Biotin) is one of the B-complex vitamins, responsible for breaking down fats and carbohydrates from food and transforming them into energy. It is important to produce keratin (stronger nails and hair). Promotes good skin health.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ACP7	rs472265	AA+	G	- -	
AR	rs6152	GG+	A	- -	
C2	rs547154	CC-	T	- -	
C3	rs2230199	CG-	C,T	+ -	
C3	rs2230205	AG-	T	- -	
CAPN10	rs3792267	GG+	A	- -	
CDKAL1	rs4712523	AG+	G	- -	
CDKAL1	rs7756992	AG+	G,T	- -	
CDKN2A	rs10811661	TT+	T	+ +	
CDKN2A/B	rs2383208	AA+	G,T	- -	
CETP	rs5880	GG+	C	- -	
CETP	rs5882	AG+	A	+ -	
CETP	rs708272	CT-	A	+ -	
CETP	rs1532624	TT-	A	- -	
CETP	rs1864163	GG+	A	- -	
CETP	rs2303790	AA+	G	- -	
CFH	rs800292	CT-	A	+ -	
CFH	rs1061147	CC+	C	- -	
CFH	rs1061170	TT+	T	- -	
CFH	rs1065489	GT+	T	- -	
CFH	rs1329428	AG-	T	- -	
CFH	rs3753394	CT+	T	- -	
COL8A1	rs13081855	GG+	T	- -	
CX3CR1	rs3732378	AG+	A	+ -	
CX3CR1	rs3732379	CT+	T	- -	
DNER	rs1861612	AG+	A,C	- -	
EPHA2	rs3754334	CC-	A	- -	
FGFR3	rs121913482	CC+	T	- -	

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FGFR3	rs121913483	CC+	A,G,T	- -	●
FTO	rs1121980	CC-	A	- -	●
GAD1	rs701492	TT+	T	- -	●
GAD1	rs2241165	AA-	T	- -	●
GCKR	rs780094	AG-	C	- -	●
HHEX	rs5015480	TT+	T	- -	●
HTRA1	rs11200638	AG+	A	+ -	●
IL-6	rs1800795	CG+	G	+ -	●
INTERGENIC	rs2223841	AA-	C	- -	●
INTERGENIC	rs6625163	AA+	A	- -	●
INTERGENIC	rs12678919	AA+	G	- -	●
IRS1	rs2943641	CT+	C	+ -	●
JAZF1	rs1635852	CT+	C	- -	●
KCNJ11	rs5215	TT+	T	- -	●
KCNJ11	rs5219	CC+	T	- -	●
KCNQ1	rs2283228	AA+	C	- -	●
NOTCH4	rs422951	AG-	C	- -	●
PAX4	rs2233580	GG-	T	- -	●
PITX2	rs6533526	GG+	A	- -	●
PPARG	rs1801282	CG+	C	+ -	●
REST	rs1713985	AC-	T	- -	●
REST	rs2227902	GG+	T	- -	●
RHOU	rs6426514	GG+	A	- -	●
RPSAP52	rs1531343	CC+	C,T	- -	●
SKIV2L	rs429608	GG+	A	- -	●
SKIV2L	rs2734331	TT-	G	- -	●
SLC30A8	rs13266634	CC+	A,T	+ +	●
TCF7L2	rs12255372	GG+	T	- -	●
TGFBR3	rs1805110	CC-	A	- -	●
TLR3	rs3775291	GG-	G,T	+ +	●
TRIB3	rs2295490	AG+	G,T	+ -	●
VEGFA	rs3025039	CC+	T	- -	●
VPS26A	rs4812829	AG+	A	- -	●

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Vitamin B2

MEDIUM

This vitamin can be found in foods such as whole grains, milk, yogurt, soy, egg and wheat germ, and its deficiency can cause various symptoms in the body.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ETFDH	rs121964954	GG+	A	- -	
FMO3	rs909530	CC+	T	- -	
FMO3	rs1736557	AG+	A	+ -	
FMO3	rs2266780	AA+	G	- -	
FMO3	rs2266782	AG+	A	+ -	
FMO3	rs61753344	GG+	T	- -	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801133	CC-	A	- -	
SLC52A2	rs375088539	CC+	T	- -	
SLC52A2	rs782345472	CC+	T	- -	
SLC52A3	rs267606684	CC-	A	- -	

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Vitamin C

MEDIUM

Ascorbic acid or vitamin C is a molecule used in the hydroxylation of various biochemical reactions in cells. Indication in orange or red indicates greater need.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	AG-	T	+ -	
ABCB1	rs1128503	CT-	G	- -	
ABCB1	rs3213619	TT-	G	- -	
ALDH2	rs671	GG+	A	+ +	
APOB	rs676210	AG+	A,T	- -	
APOB	rs1367117	GG+	A	- -	
ATM	rs664143	CC-	G,T	- -	
B3GALT1	rs13020412	AA+	G	- -	
BCO1	rs12934922	AA+	G,T	- -	
CDKN1A	rs1801270	CC+	A,T	- -	
CDKN2A	rs3731249	GG-	A,G,T	- -	
CETP	rs5882	AG+	A	+ -	
CFH	rs1061147	CC+	C	- -	
CFH	rs1061170	TT+	T	- -	
CLPTM1L	rs401681	CT+	T	+ -	
CYP1A1	rs1048943	AA-	A,C,G	- -	
CYP1A1	rs1800031	TT-	G	- -	
CYP1A1	rs41279188	CC-	A,T	- -	
CYP1A1	rs56313657	GG-	A,T	- -	
CYP1A1	rs72547509	TT-	G,T	- -	
CYP1B1	rs1056836	CC-	C	- -	
CYP2E1	rs2070673	TT+	T	- -	
CYP3A4	rs2740574	AA-	T	- -	
CYP3A5	rs776746	AG-	C	+ -	
DEF8	rs4268748	CT+	C	- -	
DIRC3	rs966423	CT+	G,T	+ -	
DPYD	rs1801266	CC-	A	- -	
DPYD	rs1801267	GG-	T	- -	
DPYD	rs1801268	GG-	A	- -	
E2F3	rs1570155	AG+	A,T	+ -	

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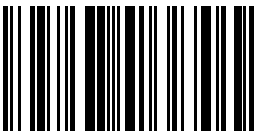
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EPHX1	rs1051740	TT+	C	- -	
EPHX1	rs2234922	AG+	G,T	+ -	
ERI1	rs96621	CT+	C	- -	
FASLG	rs763110	TT+	T	- -	
G6PD	rs1050828	CC+	T	- -	
GPX1	rs1050450	CC-	A	- -	
GSTP1	rs1695	GG+	G	+ +	
HDAC4	rs3791406	CT+	C	+ -	
HLA-DRA	rs3135391	CC-	A	- -	
HLA-DRB1	rs660895	GG+	G	+ +	
HTRA1	rs11200638	AG+	A	+ -	
INTERGENIC	rs9287638	CC+	A	- -	
INTERGENIC	rs12661968	TT+	C	- -	
IRF4	rs12203592	CC+	T	- -	
KL	rs9536314	TT+	A,G	- -	
LMNA	rs553016	GG-	G,T	- -	
MC1R	rs1805005	GG+	T	- -	
MC1R	rs1805007	CC+	T	- -	
MC1R	rs1805008	CC+	T	- -	
MC1R	rs1805009	GG+	A,C	- -	
MTHFR	rs1476413	AG-	G,T	+ -	
MTHFR	rs1801131	AC-	G	+ -	
MTHFR	rs1801133	CC-	A	- -	
MTRR	rs1801394	AA+	G	- -	
PIK3CA	rs2699887	CT+	T	- -	
PIK3CA	rs104886003	GG+	A,C	- -	
PIK3CA	rs1057519942	GG+	A	- -	
PPARG	rs17036170	GG+	A	- -	
PTEN	rs121909229	GG+	A,C,T	- -	
PTEN	rs121909232	CC+	G	- -	
RNASEL	rs3738579	CT-	G	+ -	
SLC23A1	rs33972313	GG-	A,G,T	- -	
SLC39A6	rs1050631	CT-	A	+ -	
SLC45A2	rs185146	CT+	T	+ -	
SOD2	rs4880	CT-	G	+ -	

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SOD3	rs1799895	CC+	G	- -	
STAT4	rs10181656	CG+	C	+ -	
TERT	rs2736098	AG-	T	+ -	
TERT	rs2736100	TT-	A	+ +	
XPC	rs2228000	CC-	A	- -	
XPC	rs2228001	AA-	T	- -	
XRCC1	rs1799782	CT-	A	+ -	

Vitamin A

NORMAL

Vitamin A or Retinol is a micronutrient belonging to the group of fat-soluble vitamins, which can be found in animal tissue in the form of retinoids or as a pro-vitamin in plant tissue, in the form of carotenoid. Indication in orange or red indicates greater need.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BCO1	rs6564851	TT+	G	- -	
BCO1	rs7501331	CC+	T	- -	
BCO1	rs12934922	AA+	G,T	- -	
BCO1	rs119478057	CC+	T	- -	

Reduction in Ascorbate Transport

UNDEFINED

Maintaining adequate levels of vitamin C (ascorbic acid) in the body is essential for the biosynthesis of collagen, catecholamine and carnitine; absorption of non-heme iron; Antioxidant protection and therefore plays a critical role in normal body functioning and optimal health. A number of factors, both endogenous and exogenous, contribute to the body status of vitamin C, including vitamin C transporters that regulate vitamin bioavailability and plasma and tissue concentrations; enzymatic reactions in which vitamin C is consumed by reducing redox-active metallic cofactors; and a range of environmental factors and endogenous stresses, such as oxidative stress, infection and inflammation. The two sodium-dependent vitamin C transport proteins, SVCT1 and SVCT2, are specific for the cotransport of sodium and ascorbic acid ions across cell membranes. The transcriptional regulation of SLC23 genes controls tissue distribution of SVCTs and is responsible for maintaining vitamin C levels in almost all cells, tissues and extracellular fluids. The only cells lacking functional SVCT proteins are erythrocytes, which selectively lose SVCT2 expression during erythropoiesis. Consequently, ascorbate levels in erythrocytes are low, usually in balance with the surrounding blood plasma.

Vitamins need



Name

Sample

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Reduced Conversion of Beta Carotene to Retinol

HIGH

Indicates reduced catalytic activity of beta-carotene. Carriers of the TT variant of rs7501331 showed 69% less ability to convert beta-carotene to retinol. Carriers of the A allele of rs12934922 also showed lower conversion capacity in research.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BCO1	rs6564851	TT+	G	- -	
BCO1	rs7501331	CC+	T	- -	
BCO1	rs12934922	AA+	G,T	- -	
INTERGENIC	rs11645428	GG+	A	+ +	

Absorption of Vitamin B12

MEDIUM

Orange and red indicate higher levels of Vitamin B12 absorption, especially in women.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FUT2	rs492602	CT-	A,G	+ -	
FUT2	rs601338	AG+	A	+ -	
FUT2	rs602662	AG+	G	+ -	

Riboflavin Deficiency

NORMAL

Vitamin B2, also known as riboflavin, plays important roles in the body, such as increasing blood production, maintaining proper metabolism, promoting growth, and protecting vision and the nervous system.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
MTHFR	rs1801133	CC-	A	- -	



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Biotinidase Deficiency

NORMAL

Biotinidase deficiency, also known as late-onset multiple carboxylase deficiency, is related to biotin deficiency and holocarboxylase synthetase deficiency, and presents with symptoms such as seizures, ataxia, and vomiting. An important gene associated with Biotinidase Deficiency is BTD (Biotinidase), and among related pathways/superpaths are biotin metabolism and the digestion and absorption of vitamins. Miconazole medications and immunological factors have been mentioned in the context of this disorder. Affiliated tissues include skin, testes, and brain, and related phenotypes are muscle hypotonia and generalized myoclonic seizures.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BTD	rs13073139	GG+	A		
BTD	rs13078881	GG+	C,T		
BTD	rs28934601	AA+	G		
BTD	rs34885143	GG+	A		
BTD	rs35034250	CC+	T		
BTD	rs35976361	AA+	G		
BTD	rs80338685	AA+	C		
BTD	rs80338686	CC+	A,T		
BTD	rs104893686	TT+	G		
BTD	rs104893687	CC+	T		
BTD	rs104893688	CC+	T		
BTD	rs104893692	AA+	C		
BTD	rs138818907	CC+	T		
BTD	rs146015592	GG+	A		
BTD	rs146136265	CC+	A		
BTD	rs181396238	GG+	A		
BTD	rs190386869	CC+	G		
BTD	rs200327983	AA+	C		
BTD	rs201023772	AA+	G		
BTD	rs397507170	GG+	A		
BTD	rs397507174	AA+	G		
BTD	rs397507175	GG+	A		
BTD	rs397507176	AG+	G		
BTD	rs397514333	TT+	C		
BTD	rs397514357	CC+	A		
BTD	rs397514360	GG+	A		
BTD	rs397514363	CC+	T		

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BTD	rs397514367	GG+	T	- -	
BTD	rs397514369	GG+	A	- -	
BTD	rs397514371	AA+	G	- -	
BTD	rs397514380	GG+	T	- -	

Weight

Benefit of Physical Exercise for Weight Loss

HIGH

Physical activity helps anyone to lose weight and maintain body weight more easily, but for individuals with more right results, this benefit is even greater.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADRB2	rs1042713	GG+	A	- -	
FTO	rs8050136	CC+	A	+ +	
FTO	rs9939609	TT+	A	- -	
IL-6	rs1800795	CG+	G	+ -	
INSIG2	rs9308762	TT+	A,G,T	- -	

Slimming with Restricted Carbohydrates Intake

HIGH

Diets that restrict carbohydrates have proven to be a successful dietary treatment for obesity for many people, but the degree of weight loss varies among individuals. If indicated in orange or red, it is likely that this individual has a greater benefit from carbohydrate restriction in inducing weight loss.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CETP	rs5883	CC+	T	- -	
FABP2	rs1799883	GG-	A,C,G	+ +	
PPM1K	rs1440581	AG-	A,C	- -	

Fibers and slimming

HIGH

Results indicate greater benefit in increasing fiber intake and achieving weight loss. Results in red is beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FTO	rs9930506	AA+	G	- -	
FTO	rs121918214	GG+	A	- -	
TCF7L2	rs7903146	CC+	G,T	+ +	

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Intake of saturated fat and increased body fat

HIGH

Indications in orange or red indicate a greater tendency for a diet rich in saturated fats to generate a greater accumulation of body fat.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C	- -	
ADCYAP1	rs1893154	CC-	G	- -	
ADRB3	rs4994	TT-	G	- -	
ADSS	rs3102460	CT+	T	- -	
ANKAR	rs12053254	TT+	C	- -	
ANKK1	rs1800497	CT-	A	+ -	
APOA2	rs5082	TT-	A	- -	
APOA5	rs662799	AA+	T	- -	
APOA5	rs3135506	GG+	C	+ +	
ARMC4	rs587777047	AA+	C	- -	
ARMC4	rs587777049	GG+	T	- -	
BDNF	rs6265	GG-	T	- -	
BICC1	rs11006263	AA+	G	- -	
C2CD4C	rs12978500	AC+	A	- -	
C8ORF34	rs1517114	CC+	A,G,T	- -	
CCDC77	rs1048466	AG+	A,C	- -	
CD46	rs35366573	CC+	T	- -	
CDCA3	rs5443	CT+	T	+ -	
CDHR3	rs6967330	GG+	A	- -	
CEBPB-AS1	rs4253449	GG+	A	- -	
CLOCK	rs1801260	AA+	C,G,T	- -	
COL4A1	rs3742207	AC-	A,G	- -	
CYP2E1	rs2031920	CC+	T	- -	
CYP2E1	rs2070672	AA+	G	- -	
DAPL1	rs16843372	TT+	C	- -	
DOCK8	rs192864327	GG+	C,T	- -	
ECT2	rs7646507	AG+	A	- -	
EEPD1	rs4302748	AG+	A	- -	
EHF	rs286913	CC-	G,T	- -	
EVA1A	rs17011455	TT+	C	- -	

Name

Sample

Age

Gender

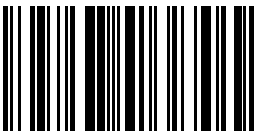
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FABP2	rs1799883	GG-	A,C,G	- -	
FAM209B	rs6024938	CT+	T	- -	
FAM71F1	rs6971091	GG+	A	- -	
FARP1	rs688872	TT-	G	- -	
FLJ33534	rs16857178	GG+	A	- -	
FSIP1	rs10152640	AG+	G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs1421085	TT+	C	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs9939609	TT+	A	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GPC5	rs2352028	CT+	G,T	+ -	
GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KIF6	rs9380880	GG+	A	- -	
LEPR	rs1137101	AA+	G	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	

Name

Sample

Age

Gender

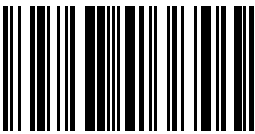
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Sample

LPP	rs1152846	AG-	C	+ -	
LRP1	rs1799986	CC+	T	- -	
MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	
MDFIC	rs7784447	GG+	A	- -	
NDUFA8	rs3818638	AG-	C	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	
NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PFKP	rs6602024	GG+	A	- -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
POC5	rs2112347	GT+	G	- -	
PPARG	rs1801282	CG+	C	+ -	
PPARG	rs3856806	CC+	T	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SEC16B	rs10913469	TT+	C	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	
SMYD3	rs11800820	CC+	A,T	- -	
SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STAT3	rs744166	TT-	A	- -	
STAT3	rs2293152	CG-	C	+ -	
STAT3	rs8069645	AA+	G	- -	

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STON2	rs6574644	AA+	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs613872	TT+	T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TCF7L2	rs4506565	AA+	G,T	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TNF	rs361525	GG+	A	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	
VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

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Trend of Monounsaturated Fat Intake and Weight Gain ● HIGH

Usually associated with genetic problems. Indication in orange or red indicate greater trend.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C	- -	●
ADCYAP1	rs1893154	CC-	G	- -	●
ADIPOQ	rs17300539	GG+	A	+ +	●
ADRB3	rs4994	TT-	G	- -	●
ADSS	rs3102460	CT+	T	- -	●
ANKAR	rs12053254	TT+	C	- -	●
ANKK1	rs1800497	CT-	A	+ -	●
APOA5	rs662799	AA+	T	- -	●
ARMC4	rs587777047	AA+	C	- -	●
ARMC4	rs587777049	GG+	T	- -	●
BICC1	rs11006263	AA+	G	- -	●
C2CD4C	rs12978500	AC+	A	- -	●
C8ORF34	rs1517114	CC+	A,G,T	- -	●
CCDC77	rs1048466	AG+	A,C	- -	●
CD46	rs35366573	CC+	T	- -	●
CDCA3	rs5443	CT+	T	+ -	●
CDHR3	rs6967330	GG+	A	- -	●
CEBPB-AS1	rs4253449	GG+	A	- -	●
COL4A1	rs3742207	AC-	A,G	- -	●
CYP2E1	rs2031920	CC+	T	- -	●
CYP2E1	rs2070672	AA+	G	- -	●
CYP2E1	rs72559710	GG+	A,C,T	- -	●
DAPL1	rs16843372	TT+	C	- -	●
DOCK8	rs192864327	GG+	C,T	- -	●
ECT2	rs7646507	AG+	A	- -	●
EEPD1	rs4302748	AG+	A	- -	●
EHF	rs286913	CC-	G,T	- -	●
EVA1A	rs17011455	TT+	C	- -	●
FAM209B	rs6024938	CT+	T	- -	●
FAM71F1	rs6971091	GG+	A	- -	●
FARP1	rs688872	TT-	G	- -	●

Name

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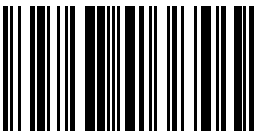
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FLJ33534	rs16857178	GG+	A	- -	
FSIP1	rs10152640	AG+	G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs1421085	TT+	C	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs9939609	TT+	A	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GPC5	rs2352028	CT+	G,T	+ -	
GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KIF6	rs9380880	GG+	A	- -	
LEPR	rs1137101	AA+	G	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPP	rs1152846	AG-	C	+ -	
MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	
MDFIC	rs7784447	GG+	A	- -	

Name

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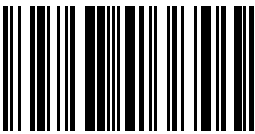
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Sample

NAT2	rs1208	GG+	G	- -	
NAT2	rs1041983	CC+	T	- -	
NAT2	rs1799929	CT+	T	+ -	
NAT2	rs1801279	GG+	A	- -	
NAT2	rs1801280	CC+	C	- -	
NAT2	rs1805158	CC+	A,T	- -	
NDUFA8	rs3818638	AG-	C	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	
NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NR1D1	rs2314339	CC+	T	+ +	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
POC5	rs2112347	GT+	G	- -	
PPARG	rs1801282	CG+	C	+ -	
PPARG	rs3856806	CC+	T	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SLC22A2	rs316019	GG-	C	- -	
SLC22A2	rs8177504	CC-	A,T	- -	
SLC22A2	rs8177507	GG-	G,T	- -	
SLC22A2	rs8177516	CC-	A,T	- -	
SLC22A2	rs8177517	AA-	C,G	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	
SMYD3	rs11800820	CC+	A,T	- -	

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SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STON2	rs6574644	AA+	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs613872	TT+	T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TNF	rs361525	GG+	A	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	
VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

Preference for fatty foods

HIGH

The preference for fatty foods is linked to genetics

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A	+ -	
CD36	rs1761667	AG+	A	+ -	
FGF21	rs838145	CT-	A	+ -	
FTO	rs9939609	TT+	A	- -	

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Binge Eating Disorder

HIGH

Binge eating disorder (BED) is a psychiatric disorder characterized by frequent episodes of binge eating in a short period of time. Contrary to what happens in bulimia nervosa, patients with BED do not present compensatory purgative behavior, that is, they do not induce vomiting, practice intense physical activities, or consume diuretics or weight-loss medications after binge-eating episodes. Symptoms: the patient with binge eating disorder uncontrollably eats large amounts of food, often even without being hungry. Feelings of anguish, lack of control and shame are often present.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		
OPRM1	rs1799971	GG+	G		

Obesity in Adolescents

HIGH

According to research, the frequency of rs8179183, a SNP in LEPR , was significantly different between obese and healthy participants, with 5.3% more obese adolescents possessing a specific gene copy (the C allele) of rs8179183 compared to controls. It is important to note that this SNP causes a so-called missense mutation and, as a result, the role of leptin in regulating food intake and body temperature is impaired. Further analysis revealed that rs8179183 was associated with serum triglyceride levels after adjustment for age and BMI. Adolescents with the GC or CC rs8179183 genotypes had more triglycerides than those with GG.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GPX4	rs757228	GG+	G		
MTNR1B	rs10830963	CC+	G		

Greater Resistance to Weight Loss on Low Calorie Diets HIGH

Several studies have examined the association between the PLIN1 gene and one-year weight loss on low-calorie diets. Individuals with this polymorphism are more resistant to losing weight on low-calorie diets.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FTO	rs1558902	TT+	A		
PLIN1	rs894160	GG-	T		



Name

Sample

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Weight loss with more protein than carbohydrate intake

HIGH

Some people tend to lose weight more than others, by eating a diet with a higher proportion of proteins than usual and less than usual carbohydrates. Indication more to the right indicates a greater tendency for this type of diet to be the most adequate.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C		
ADCYAP1	rs1893154	CC-	G		
ADRB3	rs4994	TT-	G		
ADSS	rs3102460	CT+	T		
ANKAR	rs12053254	TT+	C		
ANKK1	rs1800497	CT-	A	+	
APOA5	rs662799	AA+	T		
ARMC4	rs587777047	AA+	C		
ARMC4	rs587777049	GG+	T		
BICC1	rs11006263	AA+	G		
C2CD4C	rs12978500	AC+	A		
C8ORF34	rs1517114	CC+	A,G,T		
CCDC77	rs1048466	AG+	A,C		
CD46	rs35366573	CC+	T		
CDCA3	rs5443	CT+	T	+	
CDHR3	rs6967330	GG+	A		
COL4A1	rs3742207	AC-	A,G		
CYP2E1	rs2031920	CC+	T		
CYP2E1	rs2070672	AA+	G		
CYP2E1	rs72559710	GG+	A,C,T		
DAPL1	rs16843372	TT+	C		
DOCK8	rs192864327	GG+	C,T		
ECT2	rs7646507	AG+	A		
EEPD1	rs4302748	AG+	A		
EHF	rs286913	CC-	G,T		
EVA1A	rs17011455	TT+	C		
FAM209B	rs6024938	CT+	T		
FAM71F1	rs6971091	GG+	A		
FARP1	rs688872	TT-	G		

Name

Sample

Age

Gender

F

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FLJ33534	rs16857178	GG+	A	- -	
FSIP1	rs10152640	AG+	G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs1421085	TT+	C	- -	
FTO	rs1558902	TT+	A	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs9939609	TT+	A	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GPC5	rs2352028	CT+	G,T	+ -	
GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KIF6	rs9380880	GG+	A	- -	
LEPR	rs1137101	AA+	G	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPP	rs1152846	AG-	C	+ -	
MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	

Name

Sample

Age

Gender

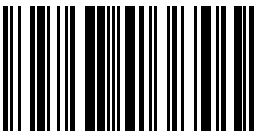
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Sample

MDFIC	rs7784447	GG+	A	- -	
NAT2	rs1208	GG+	G	- -	
NAT2	rs1041983	CC+	T	- -	
NAT2	rs1799929	CT+	T	+ -	
NAT2	rs1801279	GG+	A	- -	
NAT2	rs1801280	CC+	C	- -	
NAT2	rs1805158	CC+	A,T	- -	
NDUFA8	rs3818638	AG-	C	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	
NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PFKP	rs6602024	GG+	A	- -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
POC5	rs2112347	GT+	G	- -	
PPARG	rs1801282	CG+	C	+ -	
PPARG	rs3856806	CC+	T	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SLC22A2	rs316019	GG-	C	- -	
SLC22A2	rs8177504	CC-	A,T	- -	
SLC22A2	rs8177507	GG-	G,T	- -	
SLC22A2	rs8177516	CC-	A,T	- -	
SLC22A2	rs8177517	AA-	C,G	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	

Name

Sample

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SMYD3	rs11800820	CC+	A,T	- -	
SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STON2	rs6574644	AA+	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs613872	TT+	T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	
VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

Weight loss and abdominal fat loss in caloric restriction HIGH

Result in Orange or Red indicates greater ease of weight loss and loss of abdominal fat in calorie-restricted diets.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs10767664	AA+	T	+ +	
FTO	rs1558902	TT+	A	- -	
LEPR	rs1805134	TT+	C	- -	
PLIN1	rs894160	GG-	T	- -	
PLIN1	rs2289487	TT+	C	- -	
TCF7L2	rs7903146	CC+	G,T	- -	

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Trend of Polyunsaturated Fat Intake and Weight Gain ● HIGH

Gaining weight on excess calories from polyunsaturated fat appears to cause more gain in muscle mass, and less body fat than overeating a similar amount of saturated fat. New research from Uppsala University shows that saturated fat builds more fat and less muscle than polyunsaturated fat.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C	- -	●
ADCYAP1	rs1893154	CC-	G	- -	●
ADRB3	rs4994	TT-	G	- -	●
ADSS	rs3102460	CT+	T	- -	●
ANKAR	rs12053254	TT+	C	- -	●
ANKK1	rs1800497	CT-	A	+ -	●
ARMC4	rs587777047	AA+	C	- -	●
ARMC4	rs587777049	GG+	T	- -	●
BDNF	rs6265	GG-	T	- -	●
BICC1	rs11006263	AA+	G	- -	●
C2CD4C	rs12978500	AC+	A	- -	●
C8ORF34	rs1517114	CC+	A,G,T	- -	●
CCDC77	rs1048466	AG+	A,C	- -	●
CD46	rs35366573	CC+	T	- -	●
CDCA3	rs5443	CT+	T	+ -	●
CDHR3	rs6967330	GG+	A	- -	●
COL4A1	rs3742207	AC-	A,G	- -	●
CYP2E1	rs2031920	CC+	T	- -	●
CYP2E1	rs2070672	AA+	G	- -	●
DAPL1	rs16843372	TT+	C	- -	●
DOCK8	rs192864327	GG+	C,T	- -	●
ECT2	rs7646507	AG+	A	- -	●
EEPD1	rs4302748	AG+	A	- -	●
EHF	rs286913	CC-	G,T	- -	●
EVA1A	rs17011455	TT+	C	- -	●
FAM209B	rs6024938	CT+	T	- -	●
FAM71F1	rs6971091	GG+	A	- -	●
FARP1	rs688872	TT-	G	- -	●
FLJ33534	rs16857178	GG+	A	- -	●

Name

Sample

Age

Gender

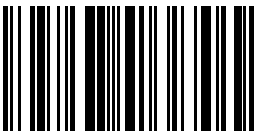
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Sample

FSIP1	rs10152640	AG+	G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs1421085	TT+	C	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GPC5	rs2352028	CT+	G,T	+ -	
GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KIF6	rs9380880	GG+	A	- -	
LEPR	rs1137101	AA+	G	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPP	rs1152846	AG-	C	+ -	
MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	
MDFIC	rs7784447	GG+	A	- -	
NDUFA8	rs3818638	AG-	C	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	

Name

Sample

Age

Gender

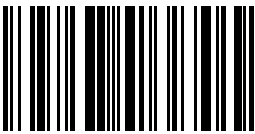
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Sample

NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
POC5	rs2112347	GT+	G	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	
SMYD3	rs11800820	CC+	A,T	- -	
SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STON2	rs6574644	AA+	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs613872	TT+	T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	

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VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

Preference for sweet foods

HIGH

The preference for sweets is linked to genetics.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FGF21	rs838133	CT-	A	+ -	
SLC2A2	rs5400	TT-	A	+ +	
TAS1R3	rs307377	CC+	A,C	- -	

Waist Measurement (in Women)

MEDIUM-HIGH

The increase in abdominal circumference indicates that the fat is located in the viscera, that is, close to the vital organs and circulatory system. It causes changes in metabolism and, consequently, enhances the development of cardiovascular problems, diabetes and high blood pressure.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
LYPLAL1	rs2605100	GG+	G	+ +	

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Adiposity

 MEDIUM-HIGH

Adiposity is associated with several secondary diseases such as type 2 diabetes, hypertension, cardiovascular disease, fatty liver and adipose tissue disorders. Essential to the risk of developing these secondary diseases is the body's fat distribution. Especially visceral fat in the belly region is associated with a higher risk, while fat deposits located in the buttocks and upper leg area are less harmful.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AATK	rs7220048	TT+	C		
ADCYAP1	rs1893154	CC-	G		
ADRB3	rs4994	TT-	G		
ADSS	rs3102460	CT+	T		
ANKAR	rs12053254	TT+	C		
ANKK1	rs1800497	CT-	A		
ARMC4	rs587777047	AA+	C		
ARMC4	rs587777049	GG+	T		
BICC1	rs11006263	AA+	G		
C2CD4C	rs12978500	AC+	A		
C8ORF34	rs1517114	CC+	A,G,T		
CCDC77	rs1048466	AG+	A,C		
CD46	rs35366573	CC+	T		
CDCA3	rs5443	CT+	T		
CDHR3	rs6967330	GG+	A		
COL4A1	rs3742207	AC-	A,G		
CYP2E1	rs2031920	CC+	T		
CYP2E1	rs2070672	AA+	G		
CYP2E1	rs72559710	GG+	A,C,T		
DAPL1	rs16843372	TT+	C		
DOCK8	rs192864327	GG+	C,T		
ECT2	rs7646507	AG+	A		
EEPD1	rs4302748	AG+	A		
EHF	rs286913	CC-	G,T		
EVA1A	rs17011455	TT+	C		
FAM209B	rs6024938	CT+	T		
FAM71F1	rs6971091	GG+	A		
FARP1	rs688872	TT-	G		

Name

Sample

Age

Gender

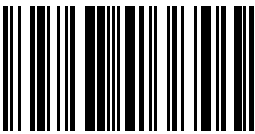
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Sample

FLJ33534	rs16857178	GG+	A	- -	
FSIP1	rs10152640	AG+	G	- -	
FTO	rs1121980	CC-	A	- -	
FTO	rs1421085	TT+	C	- -	
FTO	rs3751812	GG+	T	- -	
FTO	rs9930506	AA+	G	- -	
FTO	rs9939609	TT+	A	- -	
FTO	rs17817449	TT+	A,G	- -	
FTO	rs121918214	GG+	A	- -	
GPC5	rs2352028	CT+	G,T	+ -	
GSG1L	rs205391	CT+	C,G	- -	
HDAC9	rs11984041	CC+	T	- -	
IL-1A	rs1800587	CT-	A,C	+ -	
IL-1B	rs1143634	CT-	A	- -	
INSIG2	rs7566605	GG+	C	- -	
INTERGENIC	rs2153299	AA-	C	- -	
INTERGENIC	rs2575029	CC+	C	- -	
INTERGENIC	rs5767992	CC+	C	- -	
INTERGENIC	rs6486986	GT+	T	- -	
INTERGENIC	rs10207060	GT+	A,G	- -	
INTERGENIC	rs11070098	TT+	C	- -	
INTERGENIC	rs17054265	CC+	G,T	- -	
INTERGENIC	rs17468244	AA+	G	- -	
KIF6	rs9380880	GG+	A	- -	
LEPR	rs1137101	AA+	G	- -	
LGALS17A	rs8103033	AG+	A	- -	
LHPP	rs12773846	GG+	A,C	- -	
LINC01299	rs6981992	GT+	A,T	- -	
LINC01500	rs405460	AC-	A,T	- -	
LIPC	rs261332	GG+	G	- -	
LIPC	rs1800588	CC+	T	- -	
LPP	rs1152846	AG-	C	+ -	
LYPLAL1	rs2605100	GG+	G	+ +	
MC4R	rs10871777	AG+	G	+ -	
MC4R	rs12970134	AG+	A	- -	

Name

Sample

Age

Gender

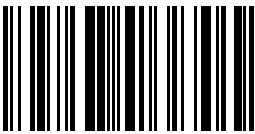
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Sample

MDFIC	rs7784447	GG+	A	- -	
MSRA	rs545854	CG-	G	+ -	
NAT2	rs1208	GG+	G	- -	
NAT2	rs1041983	CC+	T	- -	
NAT2	rs1799929	CT+	T	+ -	
NAT2	rs1801279	GG+	A	- -	
NAT2	rs1801280	CC+	C	- -	
NAT2	rs1805158	CC+	A,T	- -	
NDUFA8	rs3818638	AG-	C	- -	
NIPSNAP3B	rs2472476	AG-	T	- -	
NMNAT2	rs4652795	CT+	T	- -	
NPM2	rs11776272	GG+	G	- -	
NXPH1	rs765855	GG+	G	- -	
PCDH9	rs17081231	AA+	G	- -	
PCSK1	rs6232	AG-	C	+ -	
PFKP	rs6602024	GG+	A	- -	
PKNOX2	rs10893366	CT+	T	- -	
PLEKHG1	rs17427389	GG+	A,T	- -	
POC5	rs2112347	GT+	G	- -	
PPARG	rs3856806	CC+	T	- -	
PTPRD	rs1975197	CC-	A	- -	
PTPRN2	rs10274279	TT+	C	- -	
PVALB	rs2022068	AA+	G	- -	
RAB17	rs2292873	AG-	T	- -	
RASEF	rs10867921	AG+	A	- -	
RSU1	rs11254160	AG+	A	- -	
RYR2	rs1057517873	AA+	G	- -	
S100P	rs3822262	AA-	G	- -	
SLC22A2	rs316019	GG-	C	- -	
SLC22A2	rs8177504	CC-	A,T	- -	
SLC22A2	rs8177507	GG-	G,T	- -	
SLC22A2	rs8177516	CC-	A,T	- -	
SLC22A2	rs8177517	AA-	C,G	- -	
SLC29A3	rs1084004	CC+	C,G	- -	
SLC29A3	rs121912583	GG+	A	- -	

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SMYD3	rs11800820	CC+	A,T	- -	
SPAG16	rs16851771	AA+	G	- -	
SPOCK3	rs9312517	AA+	G	- -	
STON2	rs6574644	AA+	A	- -	
TBC1D1	rs35859249	CC+	A,T	- -	
TCF4	rs613872	TT+	T	- -	
TCF4	rs9960767	CC+	C,G	- -	
TFAP2B	rs987237	AA+	G	- -	
TM9SF2	rs9513627	AA+	A	- -	
TMEM18	rs6548238	CC+	C	- -	
TMEM229B	rs1077989	AC+	C	- -	
TMEM45B	rs10894147	CC+	T	- -	
TMOD1	rs1475545	AG-	T	- -	
TPTE2P1	rs2483374	AC+	C,T	- -	
TRAPPC9	rs267607137	CC-	A	- -	
TRIM66	rs4929923	CC+	C	- -	
UGT2B7	rs12233719	GG+	A,C,T	- -	
UNC13A	rs12608932	AC+	C	+ -	
VSIG10	rs7957470	GG+	G	- -	
WDR11-AS1	rs4783244	GG+	T	- -	
ZBTB46	rs6062314	TT+	G,T	- -	
ZNF536	rs3786800	AA-	C	- -	

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Waist Measure

 MEDIUM-HIGH

Extremely important measure to check the risk that a person has of suffering from cardiovascular disease and stroke. Result in orange or red indicates a tendency to a larger waist measurement.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADIPOQ	rs266729	CC+	A,G,T		
APOA1	rs670	AG-	T		
APOE	rs7412	TT+	T		
C5ORF67	rs6867983	CC+	T		
CLOCK	rs1801260	AA+	C,G,T		
ESR1	rs851982	TT+	C		
FTO	rs1558902	TT+	A		
FTO	rs9939609	TT+	A		
FTO	rs17817449	TT+	A,G		
GCKR	rs1260326	CT+	C		
HMGCR	rs17238484	GT+	T		
IL-1A	rs1800587	CT-	A,C		
IL-1B	rs1143634	CT-	A		
INTERGENIC	rs489693	AC+	A,T		
INTERGENIC	rs535043	CT-	A		
INTERGENIC	rs539901	TT+	G		
INTERGENIC	rs2083637	CT-	G		
INTERGENIC	rs2286983	CC-	A		
MC4R	rs2229616	GG-	C		
MC4R	rs12970134	AG+	A		
OVCH2	rs7932813	AA+	G		
PCSK1	rs6232	AG-	C		
PLIN1	rs894160	GG-	T		
PPM1L	rs9290065	CT+	T		
SH2B1	rs7498665	AG+	G,T		
SLC6A2	rs36017	CG-	A,C		
TXN	rs2301241	CT-	C		
UCP2	rs659366	CT+	T		
UCP2	rs660339	CT-	T		
UCP3	rs1800849	CT-	A,T		

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Slimness

MEDIUM-HIGH

Genetic susceptibility to being a thinner person.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AHSG	rs4917	CC+	C		

Appetite and Satiety Control

MEDIUM-HIGH

People who have greater difficulty in controlling appetite and satiety.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		
BDNF	rs925946	GT+	G		
CLOCK	rs1801260	AA+	C,G,T		
FTO	rs9939609	TT+	A		
LEPR	rs1137101	AA+	G		

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Quantitative Body Mass Index (BMI)

 MEDIUM-HIGH

The body mass index is an international measure used to calculate whether a person is at ideal weight.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AGRP	rs5030980	GG-	T		
AGT	rs699	CT-	G		
APOA1	rs670	AG-	T		
APOA2	rs5082	TT-	A		
APOA5	rs3135506	GG+	C		
FTO	rs1421085	TT+	C		
FTO	rs1558902	TT+	A		
FTO	rs8044769	TT+	C		
FTO	rs9939609	TT+	A		
FUT2	rs601338	AG+	A		
GHRL	rs35682	AA+	G		
HSD11B1	rs846910	AG+	A		
MC4R	rs2229616	GG-	C		
MC4R	rs12970134	AG+	A		
MC4R	rs17700633	AG+	A		
MC4R	rs17782313	CT+	C		
MC4R	rs52820871	TT+	G		
MTIF3	rs4771122	AG+	G		
MYO9B	rs11667918	TT+	C		
PCSK1	rs6232	AG-	C		
QPCTL	rs2287019	CC+	T		
TCF7L2	rs7903146	CC+	G,T		
TERF2	rs4783704	CC+	C		
TNF	rs361525	GG+	A		
UCP1	rs6536991	TT+	C		

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Trend towards Higher Carbohydrate Consumption

MEDIUM-HIGH

Carbohydrates are macronutrients, which are part of the group of three main sources of energy for the human body, since they complement fat and protein. They are called that because, at the chemical level, they contain carbon, hydrogen and oxygen. Carbohydrates are organic molecules typically classified according to their structure. Structurally speaking, there are two types of carbohydrates: simple and complex. Simple ones are smaller, more easily digested molecules known as monosaccharides and disaccharides, as they contain one or two sugar molecules linked together. The simplest of all sugars is the famous glucose, but there are also fructose and galactose among the monosaccharides. Disaccharides are named as sucrose, maltose, lactose. Complexes, on the other hand, are called polysaccharides, since they have more than two sugar groups linked together. Result in red or orange indicates a greater tendency to consume carbohydrates.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FGF21	rs838133	CT-	A	- -	
FTO	rs8050136	CC+	A	- -	
FTO	rs9939609	TT+	A	- -	
GCK	rs4607517	GG+	A,C	- -	
RARB	rs7619139	AA+	A,T	- -	
SLC2A2	rs5400	TT-	A	+ +	

Snacking Behaviour

MEDIUM

Eating snacks throughout the day can be an effective way to reduce hunger cravings and overeating, but eating unhealthy snacks can lead to increased calories. The tendency to overeat is largely controlled by the hormone leptin, which helps your body regulate the amount of food you eat. Genetically, the LEPR gene controls how leptin is processed in your body. Two copies of the G allele at position rs2025804 indicate greater susceptibility to excessive snacking. So if you have this predisposition, consider eating healthier snacks throughout the day and eating slower.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
LEPR	rs2025804	AA+	A	- -	
MC4R	rs17782313	CT+	C	+ -	

Weight Management

MEDIUM

It is about the care that is taken to be at the proper weight, for example, the difficulty in losing weight. Larger values on the right indicate greater difficulty in maintaining a healthy body weight.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADRB2	rs1042713	GG+	A	+ +	
ADRB3	rs4994	TT-	G	- -	
CLOCK	rs1801260	AA+	C,G,T	- -	
FABP2	rs1799883	GG-	A,C,G	- -	

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Weight Loss with the Consumption of Complex Carbohydrates

MEDIUM

Some people lose weight more easily when consuming complex carbohydrates because of their genetic susceptibility. Result indicates greater ease in losing weight with this consumption. Results in red is beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
IRS1	rs2943641	CT+	C		
PPM1K	rs1440581	AG-	A,C		
QPCTL	rs2287019	CC+	T		

Ghrelin

NORMAL

Ghrelin, also known as the "hunger hormone", is a peptide hormone produced mainly by the epsilon cells of the stomach and pancreas when the stomach is empty and acts on the lateral hypothalamus and arcuate nucleus generating the sensation of hunger. Ghrelin is involved in several metabolic and cardiovascular processes. Recent evidence suggests its involvement in the regulation of blood pressure and hypertension.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CLOCK	rs1801260	AA+	C,G,T		
GHRL	rs35680	AA-	C		
GHRL	rs4684677	TT+	T		
GHRL	rs34911341	CC+	T		
GHSR	rs509035	AG+	A		
GHSR	rs572169	AG-	T		
GHSR	rs2232165	CC-	A		
GHSR	rs2948694	AG+	G		

Weight Loss on Fat Reduction Diets

NORMAL

Some people lose more weight on reduced-fat diets, depending on their genetic characteristics.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADIPOQ	rs17300539	GG+	A		
CLOCK	rs1801260	AA+	C,G,T		
IRS1	rs2943641	CT+	C		
MTNR1B	rs10830963	CC+	G		
PPM1K	rs1440581	AG-	A,C		

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Increased waist measurement with the habit of smoking a lot

NORMAL

Trend that some individuals, who smoke a lot, are more prone to accumulation of fat in the abdominal region - ie - visceral fat. Results in orange and red indicate a greater tendency to increase the waist size with the habit of smoking a lot.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHRNA5	rs16969968	GG+	A	- -	

Lower Weight Gain on High Fat Diets

NORMAL

Less weight gain on high fat diets. Variation of the APOA5 gene modulates the effects of dietary fat intake on body mass index and obesity risk. In individuals homozygous for the major -1131T allele, BMI increased as total fat intake increased. On the other hand, this increase was not present in carriers of the minor allele -1131C. Consequently, we found significant interactions in determining the risks of obesity and overweight. Carriers of minor APOA5-1131C alleles had lower risk of obesity (OR, 0.61, 95%; CI, 0.39-0.98; P = 0.032) and risk of overweight (OR, 0.63, 95% ; CI, 0.41-0.96; P = 0.031) compared with TT subjects in the high fat intake group (> or = 30% energy), but not when the fat intake was low (OR, 1, 16, 95%; CI, 0.77-1.74; P = 0.47 and OR = 1.15, 95%; CI, 0.77-1.71; P = 0.48) for obesity and overweight , respectively). When specific groups of fatty acids were analyzed, monounsaturated fatty acids had the greatest statistical significance for these interactions. In conclusion, the SNP APOA5-1131T>C, present in approximately 13% of this population, modulates the effect of fat intake on BMI and on the risk of obesity in men and women.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
APOA5	rs662799	AA+	T	- -	

Obesity (monogenic)

NORMAL

With regard to genetic tendency, the most common form currently found in obesity is the one related to Leptin polymorphisms. If indicated in orange or red, this is the case.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
LEPR	rs1137101	AA+	G	- -	



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Trend of Higher Protein Consumption

NORMAL

The richest foods in protein are those of animal origin such as meat, fish, eggs, milk, cheese and yogurt. In addition to being present in large quantities, the proteins in these foods are also of better quality, being more easily used by the body. Approved Dietary Recommendations (RDA): Intake of adequate amounts of protein in the diet is essential for the maintenance of cell function and integrity, as well as for general health and reproduction. The RDAs for nutrients are determined at a level that should meet the needs of the majority (97-98%) of individuals at a certain stage of life, with specifications according to sex. The following RDAs are goals for healthy individuals. Adult men and women: The RDA for men and women is a daily intake of 0.80 grams of good quality protein per kilogram of body weight. Although this amount is less than what most Americans typically consume, the Dietary Reference Intake (Canada) report suggests that increased protein intakes can help people meet recommendations for essential micronutrients associated with high-protein foods , such as iron and zinc. Pregnancy and lactation: The RDA for women during pregnancy and lactation is 1.1 grams of protein per kilogram of body weight, which represents an increased need of about 25 grams of protein per day. Results in orange or red indicate a greater tendency for protein intake.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DRAM1	rs77694286	AA+	G		
FTO	rs1421085	TT+	C		

Decrease in body mass after training

NORMAL

Polymorphisms rs2267668 / rs2016520 / rs1053049 (G / C / T haplotypes) exhibited less post-training body mass decrease, suggesting that these specific G / C / T haplotypes are unfavorable for achieving the desired training-induced body mass changes (exercise). Result in red or orange indicates worse decrease in body mass after exercise.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
PPARD	rs2016520	AA-	T		
PPARD	rs2267668	AA+	A,C		

Reduction of body fat with intervention of polyphenols

NORMAL

Polyphenols are organic compounds found mainly in plants and fruits, which have the function of protecting them against insects, ultraviolet radiation and microbial infections. These substances can be ingested by humans through food, and can be found in foods such as red wine, green tea, chocolate or saffron, for example. Due to their properties, mainly antioxidant and anti-inflammatory, polyphenols bring several health benefits, from regulating metabolism and helping with weight control, to preventing chronic diseases and preventing the emergence of cancer. Result in red or orange indicates greater reduction in body fat with the intervention of polyphenols.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
IL-6	rs1800795	CG+	G		

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Weight loss on low-fat diets

NORMAL

People with the T allele of rs12255372, TCF7L2 gene, show greater weight loss and better control of glycemic levels on diets with fat restriction. Results in red or orange indicate greater weight loss and control of glycemic levels.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
QPCTL	rs2287019	CC+	T	 	
TCF7L2	rs12255372	GG+	T	 	

Preference for bitter foods

LOW

The TAS2R38 gene encodes the tongue cell protein, which controls the ability to sense glucosinolates, a family of bitter compounds. In other words, this gene is associated with a hypersensitivity to bitter taste. In the case of the C allele, there is a decrease in the susceptibility to bitterness and, therefore, these people can consume bitter foods rich in antioxidants. Bitter taste sensitivity can affect diet and taste preferences and metabolic hormonal regulation.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
TAS2R38	rs713598	GG-	G	 	
TAS2R38	rs1726866	TT-	A	 	
TAS2R38	rs10246939	TT+	C	 	

Weight gain with exercise

UNDEFINED

Easier to gain muscle mass with exercises.



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Bibliography

A2M: Laing EE, Möller-Levet CS, Poh N, Santhi N, Archer SN, Dijk D-J. Blood transcriptome based biomarkers for human circadian phase. Takahashi JS, ed. eLife. 2017;6:e20214. doi:10.7554/eLife.20214.

AATK: Tanja Haag, Christina E. Herkt, Sara K. Walesch, Antje M. Richter, Reinhard H. DammannGenes Cancer. 2014 Sep; 5(9-10): 365–374. doi: 10.18632/genesandcancer.28PMCID: PMC4209602 Cécile Jacovetti, Veronica Jimenez, Eduard Ayuso, Ross Laybutt, Marie-Line Peyot, Marc Prentki, Fatima Bosch, Romano RegazziMol Endocrinol. 2015 May; 29(5): 693–702. Published online 2015 Mar 9. doi: 10.1210/me.2014-1299PMCID: PMC5414744Aron Kos, Nikkie F. M. Olde Loohuis, Martha L. Wieczorek, Jeffrey C. Glennon

ABCA1: Ishigami M, Ogasawara F, Nagao K, et al. Temporary sequestration of cholesterol and phosphatidylcholine within extracellular domains of ABCA1 during nascent HDL generation. Scientific Reports. 2018;8:6170. doi:10.1038/s41598-018-24428-6.

ABCA2: Davis W. The ATP-binding cassette transporter-2 (ABCA2) regulates esterification of plasma membrane cholesterol by modulation of sphingolipid metabolism. Biochimica et biophysica acta. 2014;1841(1):168-179. doi:10.1016/j.bbalip.2013.10.019.

ABCA7: Aikawa T, Holm M-L, Kanekiyo T. ABCA7 and Pathogenic Pathways of Alzheimer’s Disease. Brain Sciences. 2018;8(2):27. doi:10.3390/brainsci8020027.

ABCB1: Parvathaneni RK, DeLeo VL, Spiekerman JJ, Chakraborty D, Devos KM. Parallel loss of introns in the ABCB1 gene in angiosperms. BMC Evolutionary Biology. 2017;17:238. doi:10.1186/s12862-017-1077-x.

ABCC4: Cheepala SB, Pitre A, Fukuda Y, et al. The ABCC4 membrane transporter modulates platelet aggregation. Blood. 2015;126(20):2307-2319. doi:10.1182/blood-2014-08-595942.

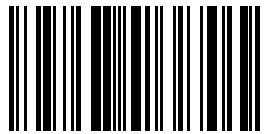
ABCC9: Peter T. Nelson, Gregory A. Jicha, Wang-Xia Wang, Eseosa Ighodaro, Sergey Artiushin, Colin G. Nichols, David W. FardoAgeing Res Rev. Author manuscript; available in PMC 2016 Nov 1.Published in final edited form as: Ageing Res Rev. 2015 Nov; 24(0 0): 111–125. Published online 2015 Jul 28. doi: 10.1016/j.arr.2015.07.007PMCID: PMC4661124 Dan Hu, Hector Barajas-Martínez, Andre Terzic, Sungjo Park, Ryan Pfeiffer, Elena Burashnikov, Yuesheng Wu, Martin Borggrefe, Christian Veltmann, Rainer Schimp

ABCG2: Shu-Ching Liang, Chih-Yung Yang, Ju-Yu Tseng, Hong-Ling Wang, Chien-Yi Tung, Hong-Wen Liu, Chin-Yau Chen, Yi-Chen Yeh, Teh-Ying Chou, Muh-Hwa Yang, Jacqueline Whang-Peng, Chi-Hung LinNeoplasia. 2015 Mar; 17(3): 265–278. Published online 2015 Mar 23. doi: 10.1016/j.neo.2015.01.004PMCID: PMC4372652 Boglárka Zámbo, Zsuzsa Bartos, Orsolya Móznér, Edit Szabó, György Várady, Gyula Poór, Márton Pálkás, Hajnalka Andrikovics, Tamás Heged?s, László Homolya, Balázs SarkadiSci Rep. 2018;

ABCG8: Genetic variations at ABCG5/G8 genes modulate plasma lipids concentrations in patients with familial hypercholesterolemia. (PMID: 20172523) Garcia-Rios A ... Perez-Jimenez F Atherosclerosis 2010 3 21 39 70 A genome-wide association scan identifies the hepatic cholesterol transporter ABCG8 as a susceptibility factor for human gallstone disease. (PMID: 17632509) Buch S ... Hampe J Nature genetics 2007 3 4 39 70 Increased gallstone risk in humans conferred by common variant of hepatic ATP-binding cassette transporter for cholesterol. (PMID: 17626266) Grünhage F ... Lammert F Hepatology (Baltimore, Md.) 2007 2 3 21 39 Two genes that map to the STSL locus cause sitosterolemia: genomic structure and spectrum of mutations involving sterolin-1 and sterolin-2, encoded by ABCG5 and ABCG8, respectively. (PMID: 11452359) Lu K ... Patel SB American journal of human genetics 2001 3 4 21 70 Accumulation of dietary cholesterol in sitosterolemia caused by mutations in adjacent ABC transporters. (PMID: 11099417) Berge KE ... Hobbs HH Science (New York, N.Y.) 2000

ABI3BP: Cloning and sequencing of a novel human gene that encodes a putative target protein of Nesh-SH3. (PMID: 11501947) Matsuda S ... Hamaguchi M Journal of human genetics 2001 2 3 4 Genome-wide association study of suicide attempts in mood disorder patients. (PMID: 21041247) Perlis RH ... Smoller JW The American journal of psychiatry 2010 3 39 Coeliac disease-associated risk variants in TNFAIP3 and REL implicate altered NF-kappaB signalling. (PMID: 19240061) Trynka G ... Wijmenga C Gut 2009 3 39 Cancer-associated loss of TARSH gene expression in human primary lung cancer. (PMID: 16205947) Terauchi K ... Fushiki S Journal of cancer research and clinical oncology 2006 3 21 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T ... Sugano S Nature genetics 2004





ABL2: Lee JK, Hallock PT, Burden SJ. Abelson tyrosine-protein kinase 2 regulates myoblast proliferation and controls muscle fiber length. Brack A, ed. eLife. 2017;6:e29905. doi:10.7554/eLife.29905.

ACE: Tikhomirova VE, Kost OA, Kryukova OV, et al. ACE phenotyping in human heart. Bader M, ed. PLoS ONE. 2017;12(8):e0181976. doi:10.1371/journal.pone.0181976. Meta-analysis of genetic studies in ischemic stroke: thirty-two genes involving approximately 18,000 cases and 58,000 controls. (PMID: 15534175) Casas JP ... Sharma P Archives of neurology 2004 3 4 39 70 Structural details on the binding of antihypertensive drugs captopril and enalaprilat to human testicular angiotensin I-converting enzyme. (PMID: 15236580) Natesh R ... Acharya KR Biochemistry 2004 3 4 21 24

ACHE: Joan Torrent, Alba Vilchez-Acosta, Diego Muñoz-Torrero, Marie Trovaslet, Florian Nachon, Arnaud Chatonnet, Katarina Grznarova, Isabelle Acquatella-Tran Van Ba, Ronan Le Goffic, Laetitia Herzog, Vincent Béringue, Human RezaeiActa Neuropathol Commun. 2015; 3: 18. Published online 2015 Apr 3. doi: 10.1186/s40478-015-0188-0 PMCID: PMC4383067 Ronit Heinrich, Rivka Hertz, Esther Zemel, Irit Mann, Liat Brenner, Amir Massarweh, Shai Berlin, Ido PerlmanFront Mol Neurosci. 2018; 11: 88.

ACMSD: Thirtamara-Rajamani K, Li P, Escobar Galvis ML, Labrie V, Brundin P, Brundin L. Is the Enzyme ACMSD a Novel Therapeutic Target in Parkinson's Disease? Journal of Parkinson's Disease. 2017;7(4):577-587. doi:10.3233/JPD-171240.

ACP7: David C Cantu, Michael J Forrester, Katherine Charov, Peter J ReillyProtein Sci. 2012 May; 21(5): 655–666. Published online 2012 Feb 28. doi: 10.1002/pro.2050PMCID: PMC3403463Till F. Schäberle, Mahsa Mir Mohseni, Friederike Lohr, Alexander Schmitz, Gabriele M. KönigAntimicrob Agents Chemother. 2014 Feb; 58(2): 950–956. doi: 10.1128/AAC.01894-13PMCID: PMC3910853Yi-Qiang Cheng, Jane M. Coughlin, Si-Kyu Lim, Ben ShenMethods Enzymol. Author manuscript; available in PMC 2015 Jun 25.Published in

ADA: Predisposição genética de responsividade à terapia para hepatite C. crônica (PMID: 16886895) Hwang Y. Chen DS Farmacogenômica 2006 3 23 45 58 Catabolismo endotelial da adenosina extracelular durante hipóxia: o papel da adenosina desaminase de superfície e CD26. (PMID: 16670267) Eltzschig HK. Colgan SP Blood 2006 3 4 23 58 Uma variação genética funcional da adenosina desaminase afeta a duração e a intensidade do sono profundo em humanos. (PMID: 16221767) Rétey JV. Landolt HP Proceedings da A

ADAMTS12: Timothy J. Mead, Daniel R. McCulloch, Jason C. Ho, Yaoyao Du, Sheila M. Adams, David E. Birk, Suneel S. ApteJCI Insight. 2018 Apr 5; 3(7): e92941. Published online 2018 Apr 5. doi: 10.1172/jci.insight.92941PMCID: PMC5928868Angela Moncada-Pazos, Alvaro J. Obaya, María Llamazares, Ritva Heljasvaara, María F. Suárez, Enrique Colado, Agnès Noël, Santiago Cal, Carlos López-OtínJ Biol Chem. 2012 Nov 16; 287(47): 39554–39563. Published online 2012 Sep 27. doi: 10.1074/jbc.M112.408625Correction in:

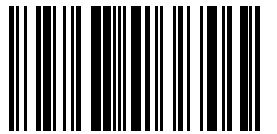
ADCY5: Cloning and sequence of partial cDNAs encoding the human type V and VI adenylyl cyclases and subsequent RNA-quantification in various tissues. (PMID: 10481931) Raimundo S . Wisser H Clinica chimica acta; international journal of clinical chemistry 1999 2 3 4 58 Gain-of-function ADCY5 mutations in familial dyskinesia with facial myokymia. (PMID: 24700542) Chen YZ . Torkamani A Annals of neurology 2014 3 4 58 ADCY5 couples glucose to insulin secretion in human islets. (PMID: 24740569) Hodson

ADCYAP1: Gaia Bazzi, Andrea Galimberti, Quentin R. Hays, Ilaria Bruni, Jacopo G. Cecere, Luca Gianfranceschi, Keith A. Hobson, Yolanda E. Morbey, Nicola Saino, Christopher G. Guglielmo, Diego RuboliniEcol Evol. 2016 May; 6(10): 3226–3239. Published online 2016 Apr 7. doi: 10.1002/ece3.2053PMCID: PMC4870208 Andrea Contina, Eli S. Bridge, Jeremy D. Ross, J. Ryan Shipley, Jeffrey F. KellyPLoS One. 2018; 13(1): e0190859. Published online 2018 Jan 11. doi: 10.1371/journal.pone.0190859PMCID: PMC5764313

ADD1: Hsu W, Wang W, Lin W, et al. Adducin-1 is essential for spindle pole integrity through its interaction with TPX2. EMBO Reports. 2018;19(8):e45607. doi:10.15252/embr.201745607.

ADD2: Costessi L, Porro F, Iaconcig A, Muro AF. TDP-43 regulates β -adducin (Add2) transcript stability. RNA Biology. 2014;11(10):1280-1290. doi:10.1080/15476286.2014.996081.

ADH1C: Peng DQ, Jung US, Lee JS, et al. Effect of alcohol dehydrogenase 1C (ADH1C) genotype on vitamin A restriction and marbling in Korean native steers. Asian-Australasian Journal of Animal Sciences. 2017;30(8):1099-1104. doi:10.5713/ajas.16.0708.



ADIPOQ: Impaired multimerization of human adiponectin mutants associated with diabetes. Molecular structure and multimer formation of adiponectin. (PMID: 12878598) Waki H ... Kadowaki T The Journal of biological chemistry 2003 3 4 21 69 Circulating high molecular weight adiponectin isoform is heritable and shares a common genetic background with insulin resistance in nondiabetic White Caucasians from Italy: evidence from a family-based study. (PMID: 19761474) Menzaghi C ... Trischitta V Journal of internal medicine 2010 3 21 39 Gene-nutrient interactions in the metabolic syndrome: single nucleotide polymorphisms in ADIPOQ and ADIPOR1 interact with plasma saturated fatty acids to modulate insulin resistance. (PMID: 20032495) Ferguson JF ... Roche HM The American journal of clinical nutrition 2010 3 21 39 Sialic acid modification of adiponectin is not required for multimerization or secretion but determines half-life in circulation. (PMID: 19855092) Richards AA ... Whitehead JP Molecular endocrinology (Baltimore, Md.) 2010 3 4 21 C-reactive protein -717C>T genetic polymorphism associates with esophagectomy-induced stress hyperglycemia. (PMID: 20145925) Motoyama S ... Ogawa J World journal of surgery 2010 FGF21/adiponectin ratio predicts deterioration in glycemia: a 4.6-year prospective study in China. (PMID: 34321008) Liu D ... Jia W Cardiovascular diabetology 2021 3 The correlation of salivary telomere length and single nucleotide polymorphisms of the ADIPOQ, SIRT1 and FOXO3A genes with lifestyle-related diseases in a Japanese population. (PMID: 33507936) Han X ... Murohashi I PloS one 2021 3 Adiponectin Gene Variant rs3774261, Effects on Lipid Profile and Adiponectin Levels after a High Polyunsaturated Fat Hypocaloric Diet with Mediterranean Pattern. (PMID: 34073587) de Luis Roman DA ... López JJ Nutrients 2021

ADORA2A: Genetic polymorphism of the adenosine A2A receptor is associated with habitual caffeine consumption. (PMID: 17616786) Cornelis MC . Campos H The American journal of clinical nutrition 2007 3 23 26 45 58 Association between ADORA2A and DRD2 polymorphisms and caffeine-induced anxiety. (PMID: 18305461) Childs E . de Wit H Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology 2008 The 2.6 angstrom crystal structure of a human A2A adenosine receptor bo

ADRA2A: Linnstaedt SD, Walker MG, Riker KD, et al. Genetic variant rs3750625 in the 3'UTR of ADRA2A affects stress-dependent acute pain severity after trauma and alters a microRNA-34a regulatory site. Pain. 2017;158(2):230-239. doi:10.1097/j.pain.0000000000000742

ADRB1: Yi B, Jahangir A, Evans AK, et al. Discovery of novel brain permeable and G protein-biased beta-1 adrenergic receptor partial agonists for the treatment of neurocognitive disorders. Karamyan V, ed. PLoS ONE. 2017;12(7):e0180319. doi:10.1371/journal.pone.0

ADRB2: Slota C, Shi A, Chen G, Bevans M, Weng N. Norepinephrine preferentially modulates memory CD8 T cell function inducing inflammatory cytokine production and reducing proliferation in response to activation. Brain, behavior, and immunity. 2015;46:168-179. do

ADRB3: Li Y, Lu X, Wang H, et al. ADRB3 Gene Trp64Arg Polymorphism and Essential Hypertension: A Meta-Analysis Including 9,555 Subjects. Frontiers in Genetics. 2018;9:106. doi:10.3389/fgene.2018.00106.

ADSS: Ante Bubi?, Natalia Mrnjavac, Igor Stuparevi?, Marta ?yczek, Beata Wielgus-Kutrowska, Agnieszka Bzowska, AšlerJ Enzyme Inhib Med Chem. 2018; 33(1): 1405–1414. Published online 2018 Sep 7. doi: 10.1080/14756366.2018.1506773PMCID: PMC6136348 Jan M. Boitz, Rona Strasser, Phillip A. Yates, Armando Jardim, Buddy UllmanJ Biol Chem. 2013 Mar 29; 288(13): 8977–8990. Published online 2013 Feb 12. doi: 10.1074/jbc.M112.431486PMCID: PMC3610970Ahmed Elhady, Shimaa Adss

AGAP2: Bingqing Hui, Hao Ji, Yetao Xu, Juan Wang, Zhonghua Ma, Chongguo Zhang, Keming Wang, Yan ZhouCell Death Dis. 2019 Mar; 10(3): 207. Published online 2019 Feb 27. doi: 10.1038/s41419-019-1384-9PMCID: PMC6393474Yegor Doush, Arif A. Surani, Amaia Navarro-Corcuera, Stephanie McArdle, E. Ellen Billett, Cristina Montiel-DuarteSci Rep. 2019; 9: 390. Published online 2019 Jan 23. doi: 10.1038/s41598-018-36888-xPMCID: PMC6344547Huaying Dong, Wei Wang, Shaowei Mo, Ru Chen, Kejian Zou, Jing Han

AGER: Kumar V, Fleming T, Terjung S, et al. Homeostatic nuclear RAGE-ATM interaction is essential for efficient DNA repair. Nucleic Acids Research. 2017;45(18):10595-10613. doi:10.1093/nar/gkx705.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



AGRP: Association between an agouti-related protein gene polymorphism and anorexia nervosa. (PMID: 11326303) Vink T . Adan RA Molecular psychiatry 2001 3 4 23 43 56 Association between a rare SNP in the second intron of human Agouti related protein gene and increased BMI. (PMID: 19602223) Kalnina I . Klovins J BMC medical genetics 2009 3 23 43 56 Family trios analysis of common polymorphisms in the obestatin/ghrelin, BDNF and AGRP genes in patients with Anorexia nervosa: association with subtype,

AGT: Krisztián Fodor, Janina Wolf, Ralf Erdmann, Wolfgang Schliebs, Matthias WilmannsPLoS Biol. 2012 Apr; 10(4): e1001309. Published online 2012 Apr 17. doi: 10.1371/journal.pbio.1001309PMCID: PMC3328432Ryousuke Satou, Hiroyuki Kobori, Akemi Katsurada, Kayoko Miyata, L. Gabriel NavarAm J Physiol Renal Physiol. 2016 Dec 1; 311(6): F1211–F1216. Published online 2016 Aug 10. doi: 10.1152/ajprenal.00320.2016PMCID: PMC5210198 Xin-Ke Chen, Li-Juan Ouyang, Zheng-Qin Yin, Yuan-You Xia, Xiu-Rong Chen

AGTR1: Youguang Pu, Fangfang Zhao, Yinpeng Li, Mingda Cui, Haiyan Wang, Xianghui Meng, Shanbao CaiBMC Cancer. 2017; 17: 45. Published online 2017 Jan 10. doi: 10.1186/s12885-016-3002-xPMCID: PMC5223322Anukriti Singh, Nidhi Srivastava, Sonal Amit, S.N. Prasad, M.P. Misra, Bushra AteeqTransl Oncol. 2018 Apr; 11(2): 233–242. Published online 2018 Feb 3. doi: 10.1016/j.tranon.2017.12.007PMCID: PMC5884113 Suwattanee Kooptiwut, Keerati Wanchai, Namoiy Semprasert, Chatchawan Srisawat, Pa-thai Yenchitsoma

AHCY: Effect of genetic variation in the human S-adenosylhomocysteine hydrolase gene on total homocysteine concentrations and risk of recurrent venous thrombosis. (PMID: 15241484) Gellekink H . Blom HJ European journal of human genetics : EJHG 2004 3 4 23 45 58 S-adenosylhomocysteine hydrolase deficiency in a human: a genetic disorder of methionine metabolism. (PMID: 15024124) Baric I . Mudd SH Proceedings of the National Academy of Sciences of the United States of America 2004 3 4 23 58 Catalyti

AHI1: Karina Tuz, Yi-Chun Hsiao, Oscar Juárez, Bingxing Shi, Erin Y. Harmon, Ian G. Phelps, Michelle R. Lennartz, Ian A. Glass, Dan Doherty, Russell J. FerlandJ Biol Chem. 2013 May 10; 288(19): 13676–13694. Published online 2013 Mar 26. doi: 10.1074/jbc.M112.420786PMCID: PMC3650405 Gilly Wolf, Tzuri Lifschytz, Hagar Ben-Ari, Pavel Tatarskyy, Tirzah Kreisel Merzel, Amit Lotan, Bernard LererTransl Psychiatry. 2018; 8: 124. Published online 2018 Jul 2. doi: 10.1038/s41398-018-0171-1PMCID: PMC6028478

AHR: Genome-wide meta-analysis identifies regions on 7p21 (AHR) and 15q24 (CYP1A2) as determinants of habitual caffeine consumption. Cornelis MC1, Monda KL, Yu K, Paynter N, Azzato EM, Bennett SN, Berndt SI, Boerwinkle E, Chanock S, Chatterjee N, Couper D, Curhan G, Heiss G, Hu FB, Hunter DJ, Jacobs K, Jensen MK, Kraft P, Landi MT, Nettleton JA, Purdue MP, Rajaraman P, Rimm EB, Rose LM, Rothman N, Silverman D, Stolzenberg-Solomon R, Subar A, Yeager M, Chasman DI, van Dam RM, Caporaso NE. Seok S-

AHSG: Structure of the gene encoding human alpha 2-HS glycoprotein (AHSG). (PMID: 9322749) Osawa M . Takeichi S Gene 1997 2 3 4 23 56 Association of AHSG gene polymorphisms with fetuin-A plasma levels and cardiovascular diseases in the EPIC-Potsdam study. (PMID: 20031641) Fisher E . Weikert C Circulation. Cardiovascular genetics 2009 3 23 43 56 AHSG tag single nucleotide polymorphisms associate with type 2 diabetes and dyslipidemia: studies of metabolic traits in 7,683 white Danish subjects. (PMI

AIRE: Roberto PerniolaFront Immunol. 2018; 9: 98. Published online 2018 Feb 12. doi: 10.3389/fimmu.2018.00098PMCID: PMC5816566Bin Gu, Jean-Philippe Lambert, Katie Cockburn, Anne-Claude Gingras, Janet RossanteLife. 2017; 6: e28131. Published online 2017 Jul 25. doi: 10.7554/eLife.28131PMCID: PMC5560860 Hideyuki Yoshida, Kushagra Bansal, Uwe Schaefer, Trevor Chapman, Inmaculada Rioja, Irina Proekt, Mark S. Anderson, Rab K. Prinjha, Alexander Tarakhovsky, Christophe Benoist, Diane Mathis

AK8: Mukai T, Crnkovi? A, Umehara T, Ivanova NN, Kyrpides NC, Söll D. RNA-Dependent Cysteine Biosynthesis in Bacteria and Archaea. Harwood CS, ed. mBio. 2017;8(3):e00561-17. doi:10.1128/mBio.00561-17.





AKT1: Mutational profile of advanced primary and metastatic radioactive iodine-refractory thyroid cancers reveals distinct pathogenetic roles for BRAF, PIK3CA, and AKT1. (PMID: 19487299) Ricarte-Filho JC ... Fagin JA Cancer research 2009 3 22 40 71 Detection of the transforming AKT1 mutation E17K in non-small cell lung cancer by high resolution melting. (PMID: 18611285) Do H ... Dobrovic A BMC research notes 2008 3 22 40 71 A transforming mutation in the pleckstrin homology domain of AKT1 in cancer. (PMID: 17611497) Carpten JD ... Thomas JE Nature 2007 3 4 22 71 Isolation and characterization of the human AKT1 gene, identification of 13 single nucleotide polymorphisms (SNPs), and their lack of association with Type II diabetes. (PMID: 11508278) Matsubara A ... Permutt MA Diabetologia 2001 3 4 22 40 Germline PIK3CA and AKT1 mutations in Cowden and Cowden-like syndromes. (PMID: 23246288) Orloff MS ... Eng C American journal of human genetics 2013

ALDH1A2: Wang Y, Shao F, Chen L. ALDH1A2 suppresses epithelial ovarian cancer cell proliferation and migration by downregulating STAT3. OncoTargets and therapy. 2018;11:599-608. doi:10.2147/OTT.S145864.

ALDH2: Kuroda A, Hegab AE, Jingtao G, et al. Effects of the common polymorphism in the human aldehyde dehydrogenase 2 (ALDH2) gene on the lung. Respiratory Research. 2017;18:69. doi:10.1186/s12931-017-0554-5.

ALDOB: Qi-fei Tao, Sheng-xian Yuan, Fu Yang, Sen Yang, Yuan Yang, Ji-hang Yuan, Zhen-guang Wang, Qing-guo Xu, Kong-ying Lin, Jie Cai, Jian Yu, Wei-long Huang, Xiao-lei Teng, Chuan-chuan Zhou, Fang Wang, Shu-han Sun, Wei-ping ZhouMol Cancer. 2015; 14: 170. Published online 2015 Sep 17. doi: 10.1186/s12943-015-0437-7PMCID: PMC4574028Jun He, Yi Jin, Yuan Chen, Hai-Bo Yao, Ying-Jie Xia, Ying-Yu Ma, Wei Wang, Qin-Shu ShaoOnco Targets Ther. 2016; 9: 6099–6109. Published online 2016 Oct 7. doi: 10.2147/O

ALK: Sharma GG, Mota I, Mologni L, Patrucco E, Gambacorti-Passerini C, Chiarle R. Tumor Resistance against ALK Targeted Therapy-Where It Comes From and Where It Goes. Cancers. 2018;10(3):62. doi:10.3390/cancers10030062.

ALLC: Christina B. Cooley, Lisa M. Ryno, Lars Plate, Gareth J. Morgan, John D. Hulleman, Jeffery W. Kelly, R. Luke WisemanProc Natl Acad Sci U S A. 2014 Sep 9; 111(36): 13046–13051. Published online 2014 Aug 25. doi: 10.1073/pnas.1406050111PMCID: PMC4246986 Gareth J Morgan, Jeffery W KellyJ Mol Biol. Author manuscript; available in PMC 2017 Oct 23.Published in final edited form as: J Mol Biol. 2016 Oct 23; 428(21): 4280–4297. Published online 2016 Aug 26

ALOX12: William H. Witola, Susan Ruosu Liu, Alexandre Montpetit, Ruth Welti, Magali Hypolite, Mary Roth, Ying Zhou, Ernest Mui, Marie-France Cesbron-Delauw, Gilbert J. Fournie, Pierre Cavailles, Cordelia Bisanz, Kenneth Boyer, Shawn Withers, A. Gwendolyn Noble, Charles N. Swisher, Peter T. Heydemann, Peter Rabiah, Stephen P. Muench, Rima McLeodInfect Immun. 2014 Jul; 82(7): 2670–2679. doi: 10.1128/IAI.01505-13PMCID: PMC4097613Soeun Kim, Irene F. Choi, Jessica R. Quante, Lei Zhang, Dennis R. Roop, M

ALOX15: Yaoyu Chen, Cong Peng, Sheela A. Abraham, Yi Shan, Zhiru Guo, Ngoc Desouza, Giulia Cheloni, Dongguang Li, Tessa L. Holyoake, Shaoguang Lij Clin Invest. 2014 Sep 2; 124(9): 3847–3862. Published online 2014 Aug 8. doi: 10.1172/JCI66129PMCID: PMC4151200Dmitry Namgaladze, Ryan G. Snodgrass, Carlo Angioni, Nina Grossmann, Nathalie Dehne, Gerd Geisslinger, Bernhard BrüneJ Biol Chem. 2015 Oct 2; 290(40): 24484–24494. Published online 2015 Aug 14. doi: 10.1074/jbc.M115.678243PMCID: PMC4591829Ryan G

ALOX5: 5-lipoxygenase pharmacogenetics in asthma: overlap with Cys-leukotriene receptor antagonist loci. (PMID: 19214143) Tantisira KG . Weiss ST Pharmacogenetics and genomics 2009 3 23 43 56 Coactosin-like protein functions as a stabilizing chaperone for 5-lipoxygenase: role of tryptophan 102. (PMID: 19807693) Esser J . Rådmark O The Biochemical journal 2009 3 4 23 56 Phosphorylation of serine 271 on 5-lipoxygenase and its role in nuclear export. (PMID: 18978352) Flamand N . Brock TG The Journal

ALPL: Liu W, Zhang L, Xuan K, et al. Alpl prevents bone ageing sensitivity by specifically regulating senescence and differentiation in mesenchymal stem cells. Bone Research. 2018;6:27. doi:10.1038/s41413-018-0029-4.

AMN: Wu C-L, Fu T-F, Chou Y-Y, Yeh S-R. A Single Pair of Neurons Modulates Egg-Laying Decisions in Drosophila . Skoulakis EMC, ed. PLoS ONE. 2015;10(3):e0121335. doi:10.1371/journal.pone.0121335.



AMY1A: Diet and the evolution of human amylase gene copy number variation. (PMID: 17828263) Perry GH ... Stone AC Nature genetics 2007 3 23 54 Identification of N-linked glycoproteins in human saliva by glycoprotein capture and mass spectrometry. (PMID: 16740002) Ramachandran P ... Loo JA Journal of proteome research 2006 3 4 54 On the genetic polymorphism of the serum alpha-amylase in the population of the south western Bulgaria (second communication). (PMID: 16152770) Baltova SD Folia medica 2005 3 41 54 The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). (PMID: 15489334) Gerhard DS ... MGC Project Team Genome research 2004 3 4 54 Probing the role of a mobile loop in substrate binding and enzyme activity of human salivary amylase. (PMID: 12527308) Ramasubbu N ... Mishra PJ Journal of molecular biology 2003

ANAPC4: Eifler K, Cuijpers SAG, Willemstein E, et al. SUMO targets the APC/C to regulate transition from metaphase to anaphase. Nature Communications. 2018;9:1119. doi:10.1038/s41467-018-03486-4.

ANKAR: Tijen Ceylan, Gökhan Kuran, Esra Bilgin, Fatih ÇelenkIran Red Crescent Med J. 2012 Aug; 14(8): 475–478. Published online 2012 Aug 30.PMCID: PMC3470841 Resmiye E. Tirali, Haluk Bodur, Gülden EceMed Oral Patol Oral Cir Bucal. 2012 May; 17(3): e517–e522. Published online 2011 Dec 6. doi: 10.4317/medoral.17566PMCID: PMC3476099 Francisco J. A. Nascimento, Agnes M. L. Karlson, Johan Näslund, Ragnar ElmgrenOecologia. 2011 Jun; 166-166(2): 337–347. Published online 2010 Dec

ANKK1: Rubio-Solsona E, Martí S, Vílchez JJ, Palau F, Hoenicka J. ANKK1 is found in myogenic precursors and muscle fibers subtypes with glycolytic metabolism. Alway SE, ed. PLoS ONE. 2018;13(5):e0197254. doi:10.1371/journal.pone.0197254.

ANKRD1: Jiménez AP, Traum A, Boettger T, Hackstein H, Richter AM, Dammann RH. The tumor suppressor RASSF1A induces the YAP1 target gene ANKRD1 that is epigenetically inactivated in human cancers and inhibits tumor growth. Oncotarget. 2017;8(51):88437-88452. doi:1

ANXA3: Man Tong, Tsun-Ming Fung, Steve T. Luk, Kai-Yu Ng, Terence K. Lee, Chi-Ho Lin, Judy W. Yam, Kwok Wah Chan, Fai Ng, Bo-Jian Zheng, Yun-Fei Yuan, Dan Xie, Chung-Mau Lo, Kwan Man, Xin-Yuan Guan, Stephanie MaStem Cell Reports. 2015 Jul 14; 5(1): 45–59. Published online 2015 Jun 18. doi: 10.1016/j.stemcr.2015.05.013PMCID: PMC4618447 Ke Wang, Jiansheng LiOncotarget. 2016 Dec 27; 7(52): 86972–86984. Published online 2016 Nov 22. doi: 10.18632/oncotarget.13493PMCID: PMC5349965 Stryder M. Meadows

AOC1: Nguyen T-N, Tuan PA, Mukherjee S, Son S, Ayele BT. Hormonal regulation in adventitious roots and during their emergence under waterlogged conditions in wheat. Journal of Experimental Botany. 2018;69(16):4065-4082. doi:10.1093/jxb/ery190.

APH1B: Biundo F, Ishiwari K, Del Prete D, D'Adamio L. Deletion of the γ -secretase subunits Aph1B/C impairs memory and worsens the deficits of knock-in mice modeling the Alzheimer-like familial Danish dementia. Oncotarget. 2016;7(11):11923-11944. doi:10.18632/onc

APOA1: Stela Z. Berisha, Greg Brubaker, Takhar Kasumov, Kimberly T. Hung, Patricia M. DiBello, Ying Huang, Ling Li, Belinda Willard, Katherine A. Pollard, Laura E. Nagy, Stanley L. Hazen, Jonathan D. SmithJ Lipid Res. 2015 Mar; 56(3): 653-664. doi: 10.1194/jlr.M056754PMCID: PMC4340312Ying Huang, Joseph A. DiDonato, Bruce S. Levison, Dave Schmitt, Lin Li, Yuping Wu, Jennifer Buffa, Timothy Kim, Gary Gerstenecker, Xiaodong Gu, Chandra Kadiyala, Zeneng Wang, Miranda K. Culley, Jennie E. Hazen, Anthon

APOA2: Yang M, Liu Y, Dai J, et al. Apolipoprotein A-II induces acute-phase response associated AA amyloidosis in mice through conformational changes of plasma lipoprotein structure. Scientific Reports. 2018;8:5620. doi:10.1038/s41598-018-23755-y.

APOA4: Wangshu Qin, Xinzhi Li, Liwei Xie, Sha Li, Jianan Liu, Linna Jia, Xue Dong, Xiaomeng Ren, Junjie Xiao, Changqing Yang, Yifa Zhou, Zheng ChenNucleic Acids Res. 2016 Jul 27; 44(13): 6423–6433. Published online 2016 Apr 29. doi: 10.1093/nar/gkw341PMCID: PMC5291254Yupeng Zhang, Jing He, Jing Zhao, Min Xu, Danwen Lou, Patrick Tso, Zongfang Li, Xiaoming LiBiochem Biophys Res Commun. Author manuscript; available in PMC 2018 May 27.Published in final edited form as: Biochem Biophys Res Commun. 2017

APOA5: Lin E, Kuo P-H, Liu Y-L, Yang AC, Kao C-F, Tsai S-J. Association and interaction of APOA5, BUD13, CETP, LIPA and health-related behavior with metabolic syndrome in a Taiwanese population. Scientific Reports. 2016;6:36830. doi:10.1038/srep36830.

Name	Sample		
Age		Gender	F
		Report date	12/09/2025
Prescriber	Health insurance		



APOB: Niu C, Luo Z, Yu L, et al. Associations of the APOB rs693 and rs17240441 polymorphisms with plasma APOB and lipid levels: a meta-analysis. Lipids in Health and Disease. 2017;16:166. doi:10.1186/s12944-017-0558-7.

APOC1: Association of apolipoproteins e4 and c1 with onset age and memory: a study of sporadic Alzheimer disease in Taiwan. (PMID: 20145290) Chuang WL . Huang CC Journal of geriatric psychiatry and neurology 2010 3 23 45 58 APOC1 T45S polymorphism is associated with reduced obesity indices and lower plasma concentrations of leptin and apolipoprotein C-I in aboriginal Canadians. (PMID: 19812053) Lahiry P . Hegele RA Journal of lipid research 2010 3 23 45 58 ApoE and ApoC-I polymorphisms: associatio

APOC3: Apolipoprotein C3 polymorphisms, cognitive function and diabetes in Caribbean origin Hispanics. (PMID: 19424489) Smith CE . Ordovás JM PloS one 2009 3 23 45 58 A null mutation in human APOC3 confers a favorable plasma lipid profile and apparent cardioprotection. (PMID: 19074352) Pollin TI . Shuldiner AR Science (New York, N.Y.) 2008 3 23 45 58 Structure and dynamics of human apolipoprotein CIII. (PMID: 18408013) Gangabadage CS . Wijmenga SS The Journal of biological chemistry 2008 3 4 23 58

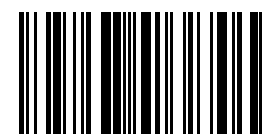
APOE: Achariyar TM, Li B, Peng W, et al. Glymphatic distribution of CSF-derived apoE into brain is isoform specific and suppressed during sleep deprivation. Molecular Neurodegeneration. 2016;11:74. doi:10.1186/s13024-016-0138-8. A influência genética sobre a memória humana: uma revisão Fabiana Michelsen de Andrade1*, Vanessa Kappel da Silva 1 e Jaqueline Bohrer Schuch 2 The role of cigarette smoking and statins in the development of postmenopausal osteoporosis: a pilot study utilizing the Marshfi



Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



APOE4: ApoE-Isoform-Dependent SARS-CoV-2 Neurotropism and Cellular Response. (PMID: 33450186) Wang C ... Shi Y Cell stem cell 2021 3 4 Cytokine polymorphisms and Alzheimer disease: possible associations. (PMID: 20213229) Ribizzi G ... Megna M Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology 2010 3 39 Cognitive function after major noncardiac surgery, apolipoprotein E4 genotype, and biomarkers of brain injury. (PMID: 20216394) McDonagh DL ... Neurologic Outcome Research Group Anesthesiology 2010 3 39 MTHFR C677T, FII G20210A, FV Leiden G1691A, NOS3 intron 4 VNTR, and APOE epsilon4 gene polymorphisms are not associated with spontaneous cervical artery dissection. (PMID: 20446941) Jara-Prado A ... Arauz A International journal of stroke : official journal of the International Stroke Society 2010 3 39 Association analysis of CbetaS 844ins68 and MTHFD1 G1958A polymorphisms with Alzheimer's disease in Chinese. (PMID: 20217437) Bi XH ... Zhang JW Journal of neural transmission (Vienna, Austria : 1996) 2010 3 39 Effect of Alzheimer disease genetic risk disclosure on dietary supplement use. (PMID: 20219963) Vernarelli JA ... Green RC The American journal of clinical nutrition 2010 3 39 Age-at-Onset and APOE-Related Heterogeneity in Pathologically Confirmed Sporadic Alzheimer Disease. (PMID: 33722993) Smirnov DS ... Salmon DP Neurology 2021 3 Human-lineage-specific genomic elements are associated with neurodegenerative disease and APOE transcript usage. (PMID: 33824317) Chen Z ... Ryten M Nature communications 2021 3 Low CD4+ cell count nadir exacerbates the impacts of APOE ε4 on functional connectivity and memory in adults with HIV. (PMID: 33587445) Yang FN ... Jiang X AIDS (London, England) 2021 3 Lipid-bound ApoE3 self-assemble into elliptical disc-shaped particles. (PMID: 33189719) Larsen AH ... Midtgaard SR Biochimica et biophysica acta. Biomembranes 2021 3 Testing influences of APOE and BDNF genes and heart failure on cognitive function. (PMID: 32703621) Jung M ... Pressler SJ Heart & lung : the journal of critical care 2021 3 Association of Subjective Hearing Loss and Apolipoprotein E ε4 Allele on Alzheimer's Disease Neurodegeneration. (PMID: 33301284) Neff RM ... McNulty B Otology & neurotology : official publication of the American Otological Society, American Neurotology Society [and] European Academy of Otology and Neurotology 2021 3 Association of APOE Genotype With Heterogeneity of Cognitive Decline Rate in Alzheimer Disease. (PMID: 33771840) Qian J ... Serrano-Pozo A Neurology 2021 3 Differences in Recycling of Apolipoprotein E3 and E4-LDL Receptor Complexes-A Mechanistic Hypothesis. (PMID: 34068576) Kim M ... Bezprozvanny I International journal of molecular sciences 2021 3 TOMM40 and APOE variants synergistically increase the risk of Alzheimer's disease in a Chinese population. (PMID: 32725468) Zhu Z ... Ding D Aging clinical and experimental research 2021 3 Association of Apolipoprotein E Polymorphisms and Risks of Ischemic Stroke in Chinese Patients with Type 2 Diabetes Mellitus. (PMID: 33490286) Wang N ... Ma L Journal of diabetes research 2021 3 Association of APOE4 and Clinical Variability in Alzheimer Disease With the Pattern of Tau- and Amyloid-PET. (PMID: 33262228) La Joie R ... Rabinovici GD Neurology 2021 3 The sex-specific effect of the apolipoprotein E allele and methylenetetrahydrofolate reductase gene polymorphism on the biochemical, anatomical, and cognitive profiles of patients clinically diagnosed with probable Alzheimer's disease. (PMID: 33166415) Kim HJ ... Park J International journal of geriatric psychiatry 2021 3 APOE and Alzheimer's disease: advances in genetics, pathophysiology, and therapeutic approaches. (PMID: 33340485) Serrano-Pozo A ... Hyman BT The Lancet. Neurology 2021 3 [Correlation of cerebrospinal fluid amyloid β-protein 42 and neurofilament light protein levels with postoperative neurocognitive dysfunction in elderly patients]. (PMID: 33963718) Zhang X ... Fu Q Nan fang yi ke da xue xue bao = Journal of Southern Medical University 2021 3 Association of Apolipoprotein E gene polymorphism with the risk of T2DM and obesity among Egyptian subjects. (PMID: 33059023) Galal AA ... Elshazli RM Gene 2021 3 Effects of APOE e4-allele and mental work demands on cognitive decline in old age: Results from the German Study on Ageing, Cognition, and Dementia in Primary Care Patients (AgeCoDe). (PMID: 32819031) Rodriguez FS ... Riedel-Heller SG International journal of geriatric psychiatry 2021 3 APOE ε4 and cognitive reserve effects on the functional network in the Alzheimer's disease spectrum. (PMID: 32314201) Li T ... Alzheimer's Disease Neuroimaging Initiative Brain imaging and behavior 2021 3 High density lipoprotein structure-function and role in reverse cholesterol transport. (PMID: 20213545) Lund-Katz S ... Phillips MC Sub-cellular biochemistry 2010 21 Combination of apolipoprotein E2 and lipoprotein lipase heterozygosity causes severe hypertriglyceridemia during pregnancy. (PMID: 16142021) Hiéronimus S ... Fredenrich A Diabetes & metabolism 2005 3 A liver X receptor and retinoid X receptor heterodimer mediates apolipoprotein E expression, secretion and cholesterol homeostasis in astrocytes. (PMID: 14720212) Liang Y ... Paul SM Journal of neurochemistry 2004



APP: Hereditary cerebral hemorrhage with amyloidosis associated with the E693K mutation of APP. (PMID: 20697050) Bugiani O ... Tagliavini F Archives of neurology 2010 3 4 41 Genetic screening of Alzheimer's disease genes in Iberian and African samples yields novel mutations in presenilins and APP. (PMID: 18667258) Guerreiro RJ ... Clarimón J Neurobiology of aging 2010 3 23 41 APP and BACE1 miRNA genetic variability has no major role in risk for Alzheimer disease. (PMID: 19462468) Bettens K ... Van Broeckhoven C Human mutation 2009 3 23 41 High striatal amyloid beta-peptide deposition across different autosomal Alzheimer disease mutation types. (PMID: 20008660) Villemagne VL ... Rowe CC Archives of neurology 2009 3 23 41 Regulation of FE65 nuclear translocation and function by amyloid beta-protein precursor in osmotically stressed cells. (PMID: 18468999) Nakaya T ... Suzuki T The Journal of biological chemistry 2008

AR: Sakkiah S, Kusko R, Pan B, et al. Structural Changes Due to Antagonist Binding in Ligand Binding Pocket of Androgen Receptor Elucidated Through Molecular Dynamics Simulations. Frontiers in Pharmacology. 2018;9:492. doi:10.3389/fphar.2018.00492.

ARHGAP11A: Bin Dai, Xuan Zhang, Runze Shang, Jianlin Wang, Xisheng Yang, Hong Zhang, Qi Liu, Desheng Wang, Lin Wang, Kefeng DouCell Commun Signal. 2018; 16: 99. Published online 2018 Dec 13. doi: 10.1186/s12964-018-0312-4PMCID: PMC6293628 Yoshinori Kagawa, Shinji Matsumoto, Yuji Kamioka, Koshi Mimori, Yoko Naito, Taeko Ishii, Daisuke Okuzaki, Naohiro Nishida, Sakae Maeda, Atsushi Naito, Junichi Kikuta, Keizo Nishikawa, Junichi Nishimura, Naotsugu Haraguchi, Ichiro Takemasa, Tsunekazu Mizushima

ARHGAP20: Bao H, Li F, Wang C, et al. Structural Basis for the Specific Recognition of RhoA by the Dual GTPase-activating Protein ARAP3. The Journal of Biological Chemistry. 2016;291(32):16709-16719. doi:10.1074/jbc.M116.736140.

ARHGAP24: Gaosi Xu, Xiongbing Lu, Tianlun Huang, Jie FanOncotarget. 2016 Aug 9; 7(32): 51829–51839. Published online 2016 Jul 2. doi: 10.18632/oncotarget.10386PMCID: PMC5239517Lei Wang, Saie Shen, Mingsong Wang, Fangbao Ding, Haibo Xiao, Guoqing Li, Fengqing HuMed Sci Monit. 2019; 25: 21–31. Published online 2019 Jan 1. doi: 10.12659/MSM.911503PMCID: PMC6327779 Xianping Dai, Feng Geng, Jiale Dai, Mengshun Li, Ming LiuMed Sci Monit. 2018; 24: 8669–8677. Published online 2018 Nov 30. doi: 10.12659/MSM.

ARHGAP30: Zhang L, Cao H, He T, et al. Overexpression of PRDM13 inhibits glioma cells via Rho and GTP enzyme activation protein. International Journal of Molecular Medicine. 2018;42(2):966-974. doi:10.3892/ijmm.2018.3679.

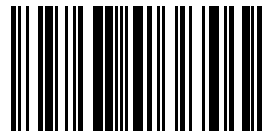
ARHGEF3: Zou S, Teixeira AM, Kostadima M, et al. SNP in human ARHGEF3 promoter is associated with DNase hypersensitivity, transcript level and platelet function, and Arhgef3 KO mice have increased mean platelet volume. Schulz C, ed. PLoS ONE. 2017;12(5):e0178095.

ARL15: Nuno Rocha, Felicity Payne, Isabel Huang-Doran, Alison Sleight, Katherine Fawcett, Claire Adams, Anna Stears, Vladimir Saudek, Stephen O'Rahilly, Inês Barroso, Robert K. SempleSci Rep. 2017; 7: 17593. Published online 2017 Dec 14. doi: 10.1038/s41598-017-17746-8PMCID: PMC5730586 Tanguy Corre, Francisco J. Arjona, Caroline Hayward, Sonia Youhanna, Jeroen H.F. de Baaij, Hendrica Belge, Nadine Nägele, Huguette Debaix, Maxime G. Blanchard, Michela Traglia, Sarah E. Harris, Sheila Ulivi, Rico Rue

ARMC4: Rim Hjeij, Anna Lindstrand, Richard Francis, Maimoona A. Zariwala, Xiaoqin Liu, You Li, Rama Damerla, Gerard W. Dougherty, Marouan Abouhamed, Heike Olbrich, Niki T. Loges, Petra Pennekamp, Erica E. Davis, Claudia M.B. Carvalho, Davut Pehlivan, Claudius Werner, Johanna Raidt, Gabriele Köhler, Karsten Häffner, Miguel Reyes-Mugica, James R. Lupski, Margaret W. Leigh, Margaret Rosenfeld, Lucy C. Morgan, Michael R. Knowles, Cecilia W. Lo, Nicholas Katsanis, Heymut Omran

ARMS2: Micklisch S, Lin Y, Jacob S, et al. Age-related macular degeneration associated polymorphism rs10490924 in ARMS2 results in deficiency of a complement activator. Journal of Neuroinflammation. 2017;14:4. doi:10.1186/s12974-016-0776-3.

ARRB2: Wang H, Deng Q-W, Peng A-N, et al. β -arrestin2 functions as a key regulator in the sympathetic-triggered immunodepression after stroke. Journal of Neuroinflammation. 2018;15:102. doi:10.1186/s12974-018-1142-4.



ARVCF: Rappe U, Schlechter T, Aschoff M, Hotz-Wagenblatt A, Hofmann I. Nuclear ARVCF Protein Binds Splicing Factors and Contributes to the Regulation of Alternative Splicing. The Journal of Biological Chemistry. 2014;289(18):12421-12434. doi:10.1074/jbc.M113.530

AS3MT: Michael Palmgren, Karin Engström, Björn M. Hallström, Karin Wahlberg, Dan Ariel Søndergaard, Torbjörn Säll, Marie Vahter, Karin Broberg PLoS One. 2017; 12(4): e0175422. Published online 2017 Apr 20. doi: 10.1371/journal.pone.0175422 PMID: PMC5398495 Karin S. Engström, Mohammad Bakhtiar Hossain, Martin Lauss, Sultan Ahmed, Rubhana Raqib, Marie Vahter, Karin Broberg PLoS One. 2013; 8(1): e53732. Published online 2013 Jan 14. doi: 10.1371/journal.pone.0053732 PMID: PMC3544896 Hao Zhang, Yichen Ge,

ASIC2: Kimberly P. Gannon, Susan E. McKey, David E. Stec, Heather A. Drummond Am J Physiol Renal Physiol. 2015 Feb 15; 308(4): F339–F348. Published online 2014 Dec 17. doi: 10.1152/ajprenal.00572.2014 PMID: PMC4329487 Zhi-hang Zhou, Jin-wen Song, Wen Li, Xue Liu, Liu Cao, Lu-ming Wan, Ying-xia Tan, Shou-ping Ji, Yu-mei Liang, Feng Gong J Exp Clin Cancer Res. 2017; 36: 130. Published online 2017 Sep 19. doi: 10.1186/s13046-017-0599-9 PMID: PMC5606037 Margaret P. Price, Huiyu Gong, Meredith G. Parsons

ASL: Regulation of cellular metabolism by protein lysine acetylation. (PMID: 20167786) Zhao S . Guan KL Science (New York, N.Y.) 2010 3 4 23 58 Functional complementation in yeast allows molecular characterization of missense argininosuccinate lyase mutations. (PMID: 19703900) Trevisson E . Salviati L The Journal of biological chemistry 2009 3 4 23 58 Argininosuccinate lyase deficiency: mutational spectrum in Italian patients and identification of a novel ASL pseudogene. (PMID: 17326097) Trevisson

ASS-1: Mutations and polymorphisms in the human argininosuccinate synthetase (ASS1) gene. (PMID: 19006241) Engel K ... Häberle J Human mutation 2009 3 4 21 70 Investigation of citrullinemia type I variants by in vitro expression studies. (PMID: 18473344) Berning C ... Häberle J Human mutation 2008 3 4 21 70 Identification of 16 novel mutations in the argininosuccinate synthetase gene and genotype-phenotype correlation in 38 classical citrullinemia patients. (PMID: 12815590) Gao HZ ... Saheki T Human mutation 2003 3 4 21 70 Structure of the human argininosuccinate synthetase gene and an improved system for molecular diagnostics in patients with classical and mild citrullinemia. (PMID: 11941481) Häberle J ... Koch HG Human genetics 2002 3 4 21 70 Characterization of human wild-type and mutant argininosuccinate synthetase proteins expressed in bacterial cells. (PMID: 8792870) Shaheen N ... Saheki T Enzyme & protein 1994

ASTN2: Chang H, Smallwood PM, Williams J, Nathans J. Intramembrane Proteolysis of Astrotactins. The Journal of Biological Chemistry. 2017;292(8):3506-3516. doi:10.1074/jbc.M116.768077.

ATM: Qian M, Liu Z, Peng L, et al. Boosting ATM activity alleviates aging and extends lifespan in a mouse model of progeria. Kaeberlein M, ed. eLife. 2018;7:e34836. doi:10.7554/eLife.34836.

ATP2B1: Okuyama Y, Hirawa N, Fujita M, et al. The effects of anti-hypertensive drugs and the mechanism of hypertension in vascular smooth muscle cell-specific ATP2B1 knockout mice. Hypertension Research. 2018;41(2):80-87. doi:10.1038/hr.2017.92.

ATP6V1B1: Gueutin V, Vallet M, Jayat M, et al. Renal β -intercalated cells maintain body fluid and electrolyte balance. The Journal of Clinical Investigation. 2013;123(10):4219-4231. doi:10.1172/JCI63492.

ATP7B: Polishchuk EV, Concilli M, Iacobacci S, et al. Wilson Disease Protein ATP7B Utilizes Lysosomal Exocytosis to Maintain Copper Homeostasis. Developmental Cell. 2014;29(6):686-700. doi:10.1016/j.devcel.2014.04.033.

ATP8B4: Gao L, Emond MJ, Louie T, et al. Whole-exome Sequencing Identifies Rare Variants in ATP8B4 as a Risk Factor for Systemic Sclerosis. Arthritis & rheumatology (Hoboken, NJ). 2016;68(1):191-200. doi:10.1002/art.39449.

ATXN2: Genetic variance in the spinocerebellar ataxia type 2 (ATXN2) gene in children with severe early onset obesity. (PMID: 20016785) Figueroa KP . Pulst SM PloS one 2009 3 23 45 58 Ataxin-2 associates with the endocytosis complex and affects EGF receptor trafficking. (PMID: 18602463) Nonis D . Auburger G Cellular signalling 2008 3 4 23 58 Screening for premutation in the FMR1 gene in male patients suspected of spinocerebellar ataxia. (PMID: 19235102) Rajkiewicz M . Zaremba J Neurologia i neuroc

Name Sample

Age

Gender

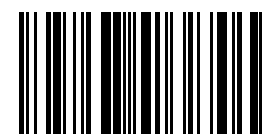
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

AURKA: Wang J, Nikhil K, Viccaro K, Chang L, White J, Shah K. Phosphorylation-dependent regulation of ALDH1A1 by Aurora kinase A: insights on their synergistic relationship in pancreatic cancer. BMC Biology. 2017;15:10. doi:10.1186/s12915-016-0335-5.

AUTS2: Zhonghua Gao, Pedro Lee, James M. Stafford, Melanie von Schimmelmann, Anne Schaefer, Danny Reinberg Nature. 2014 Dec 18; 516(7531): 349–354. doi: 10.1038/nature13921 PMID: PMC4323097 Olivia Engmann, Benoit Labonte, Amanda Mitchell, Pavel Bashtrykov, Erin S. Calipari, Chaggai Rosenbluh, Yong-Hwee E. Loh, Deena M. Walker, Dominika Burek, Peter J. Hamilton, Orna Issler, Rachael L. Neve, Gustavo Turecki, Yasmin Hurd, Andrew Chess, Li Shen, Isabelle Mansuy, Albert Jeltsch, Schahram Akbarian

AVPR1A: Lonn E, Koskela E, Mappes T, Morkkonen M, Sims AM, Watts PC. Balancing selection maintains polymorphisms at neurogenetic loci in field experiments. Proceedings of the National Academy of Sciences of the United States of America. 2017;114(14):3690-3695. doi

B2M: The ESAT-6 protein of Mycobacterium tuberculosis interacts with beta-2-microglobulin (?2M) affecting antigen presentation function of macrophage. (PMID: 25356553) Sreejit G . Mukhopadhyay S PLoS pathogens 2014 3 4 58 Hereditary systemic amyloidosis due to Asp76Asn variant ?2-microglobulin. (PMID: 22693999) Valleix S . Bellotti V The New England journal of medicine 2012 3 4 58 Variation at the NFATC2 locus increases the risk of thiazolidinedione-induced edema in the Diabetes REduction Assess

B3GALT1: A family of human beta3-galactosyltransferases. Characterization of four members of a UDP-galactose:beta-N-acetylglucosamine/beta-nacetyl-galactosamine beta-1,3-galactosyltransferase family. (PMID: 9582303) Amado M . Clausen H The Journal of biological chemistry 1998 2 3 4 23 58 Generation and annotation of the DNA sequences of human chromosomes 2 and 4. (PMID: 15815621) Hillier LW . Wilson RK Nature 2005 3 4 58 The status, quality, and expansion of the NIH full-length cDNA project: the Ma

BAAT: Nathan A. Styles, Erin M. Shonsey, Josie L. Falany, Amber L. Guidry, Stephen Barnes, Charles N. Falany J Lipid Res. 2016 Jul; 57(7): 1133–1143. doi: 10.1194/jlr.M064428 PMID: PMC4918843 Marjolein A. E. van Stiphout, Johan Marinus, Jacobus J. van Hilten, Frank Lobbezoo, Cees de Baat Parkinsons Dis. 2018; 2018: 9315285. Published online 2018 May 8. doi: 10.1155/2018/9315285 PMID: PMC5964533 Anne L. Versteeg, Jorrit-Jan Verlaan, Paul de Baat, Tim U. Jija, Agnita Stadhouder, Carel H. Diekerhof

BACE1: GGA1 regulates signal-dependent sorting of BACE1 to recycling endosomes, which moderates A? production. Toh WH, Chia PZC, Hossain MI, Gleeson PA. Mol Biol Cell. 2018 Jan 15;29(2):191-208. doi: 10.1091/mbc.E17-05-0270. Epub 2017 Nov 15. PMID: 29142073 Increased BACE1-AS long noncoding RNA and ?-amyloid levels in heart failure. Greco S, Zaccagnini G, Fuschi P, Voellenkle C, Carrara M, Sadeghi I, Bearzi C, Maimone B, Castelvechio S, Stellos K, Gaetano C, Menicanti L, Martelli F. Cardiovasc R

BAG3: Ilker Kudret Sariyer, Nana Merabova, Prem Kumer Patel, Tijana Knezevic, Alessandra Rosati, Maria C. Turco, Kamel Khalili PLoS One. 2012; 7(9): e45000. Published online 2012 Sep 12. doi: 10.1371/journal.pone.0045000 PMID: PMC3440322 Margit Fuchs, Carole Luthold, Solenn M. Guilbert, Alice Anaïs Varlet, Herman Lambert, Alexandra Jetté, Sabine Elowe, Jacques Landry, Josée N. Lavoie PLoS Genet. 2015 Oct; 11(10): e1005582. Published online 2015 Oct 23 10.1371/journal.pgen.1005582 PMID: PMC4619

BAG6: Jee-Young Mock, Yue Xu, Yihong Ye, William M. Clemons, Jr Proc Natl Acad Sci U S A. 2017 Oct 31; 114(44): 11679–11684. Published online 2017 Oct 17. doi: 10.1073/pnas.1702940114 PMID: PMC5676875 Giedre Krenciute, Shangfeng Liu, Nur Yucer, Yi Shi, Priscilla Ortiz, Qiongming Liu, Beom-Jun Kim, Abiola Ore Odejimi, Mei Leng, Jun Qin, Yi Wang J Biol Chem. 2013 Jul 12; 288(28): 20547–20557. Published online 2013 May 30. doi: 10.1074/jbc.M112.443416 PMID: PMC3711319 Aishwarya Payapilly

BARD1: Zhao W, Steinfeld JB, Liang F, et al. Promotion of RAD51-mediated homologous DNA pairing by BRCA1-BARD1. Nature. 2017;550(7676):360-365. doi:10.1038/nature24060.

BATF: Sang-Heon Park, Jinseol Rhee, Seul-Ki Kim, Jung-Ah Kang, Ji-Sun Kwak, Young-Ok Son, Wan-Su Choi, Sung-Gyoo Park, Jang-Soo Chun Arthritis Res Ther. 2018; 20: 161. Published online 2018 Aug 2. doi: 10.1186/s13075-018-1658-0 PMID: PMC6090970 Makoto Kurachi, R. Anthony Barnitz, Nir Yosef, Pamela M. Odorizzi, Michael A. Dilorio, Madeleine E. Lemieux, Kathleen Yates, Jernej Godec, Martin G. Klatt, Aviv Regev, E. John Wherry, W. Nicholas Haining Nat Immunol. 2014 Apr; 15(4): 373–383. Published onli

BCAT1: Wang Z-Q, Faddaoui A, Bachvarova M, et al. BCAT1 expression associates with ovarian cancer progression: possible implications in altered disease metabolism. Oncotarget. 2015;6(31):31522-31543.



BCKDK: Xue P, Zeng F, Duan Q, et al. BCKDK of BCAA Catabolism Cross-talking With the MAPK Pathway Promotes Tumorigenesis of Colorectal Cancer. *EBioMedicine*. 2017;20:50-60. doi:10.1016/j.ebiom.2017.05.001.

BCO1: Gong X, Marisiddaiah R, Rubin LP. Inhibition of pulmonary γ -carotene 15, 15'-oxygenase expression by glucocorticoid involves PPAR γ . *Lobaccaro J-MA, ed. PLoS ONE*. 2017;12(7):e0181466. doi:10.1371/journal.pone.0181466.

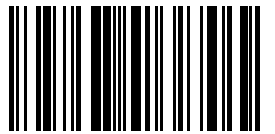
BCR: Yuda J, Miyamoto T, Odawara J, et al. Persistent detection of alternatively spliced BCR-ABL variant results in a failure to achieve deep molecular response. *Cancer Science*. 2017;108(11):2204-2212. doi:10.1111/cas.13353.

BDNF: Brain-derived neurotrophic factor and obesity in the WAGR syndrome. (PMID: 18753648) Han JC . Yanovski JA *The New England journal of medicine* 2008 3 4 23 45 58 Brain-derived neurotrophic factor (BDNF) gene: no major impact on antidepressant treatment response. (PMID: 19236730) Domschke K . Baune BT *The international journal of neuropsychopharmacology* 2010 3 23 45 58 The effect of depression, BDNF gene val66met polymorphism and gender on serum BDNF levels. (PMID: 19589373) Ozan E . Akarsu N Variations in FKBP5 and BDNF genes are suggestively associated with depression in a Swedish population-based cohort. (PMID: 20226536) Lavebratt C ... Forsell Y *Journal of affective disorders* 2010 3 39 The brain-derived neurotrophic factor Val66Met polymorphism, hippocampal volume, and cognitive function in geriatric depression. (PMID: 20220593) Benjamin S ... Taylor WD *The American journal of geriatric psychiatry : official journal of the American Association for Geriatric Psychiatry* 2010 3 39 Assessment of peripheral biomarkers potentially involved in episodic and chronic migraine: a case-control study with a focus on NGF, BDNF, VEGF, and PGE2. (PMID: 34991456) Mozafarihashjin M ... Martami F *The journal of headache and pain* 2022 3 Female-specific effect of the BDNF gene on Alzheimer's disease. (PMID: 28202203) Li GD ... Yao YG *Neurobiology of aging* 2017 3 Activity-dependent release of endogenous BDNF from mossy fibers evokes a TRPC3 current and Ca²⁺ elevations in CA3 pyramidal neurons. (PMID: 20220070) Li Y ... Pozzo-Miller L *Journal of neurophysiology* 2010 Dual proteome-scale networks reveal cell-specific remodeling of the human interactome. (PMID: 33961781) Huttlin EL ... Gygi SP *Cell* 2021 3 Association of COMT, BDNF and 5-HTT functional polymorphisms with personality characteristics. (PMID: 34856753) Tommasi M ... Gatta V *Frontiers in bioscience (Landmark edition)* 2021 3 Genetic polymorphisms for BDNF, COMT, and APOE do not affect gait or ankle motor control in chronic stroke: A preliminary cross-sectional study. (PMID: 32378476) Aljuhni R ... Madhavan S *Topics in stroke rehabilitation* 2021 Polyacrylamide gel-based microarray: a novel method applied to the association Study between the polymorphisms of BDNF gene and autism. (PMID: 20201430) Cheng L ... Lu Z *Journal of biomedical nanotechnology* 2009 3 39 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA *Nature* 2020 3 Experiencing community and domestic violence is associated with epigenetic changes in DNA methylation of BDNF and CLPX in adolescents. (PMID: 31059136) Serpeloni F ... Elbert T *Psychophysiology* 2020 3 Association between categorization of emotionally-charged and neutral visual scenes and parameters of event-related potentials in carriers of different COMT, HTR2A, BDNF gene genotypes. (PMID: 32983417) Vorobyeva EV ... Stoletniy AS *F1000Research* 2020 3 Catechol-O-Methyltransferase Gene Polymorphisms and the Risk of Chemotherapy-Induced Prospective Memory Impairment in Breast Cancer Patients with Varying Tumor Hormonal Receptor Expression. (PMID: 32985495) Li W ... Shen L *Medical science monitor : international medical journal of experimental and clinical research* 2020

BHMT: Rui Y-N, Xu Z, Chen Z, Zhang S. The GST-BHMT assay reveals a distinct mechanism underlying Proteínasome inhibition-induced macroautophagy in mammalian cells. *Autophagy*. 2015;11(5):812-832. doi:10.1080/15548627.2015.1034402.

BICC1: Benjamin Rothé, Lucia Leal-Esteban, Florian Bernet, Séverine Urfer, Nicholas Doerr, Thomas Weimbs, Justyna Iwaszkiewicz, Daniel B. Constam *Mol Cell Biol*. 2015 Oct; 35(19): 3339–3353. Prepublished online 2015 Jul 27. Published online 2015 Sep 4. doi: 10.1128/MCB.00341-15PMCID: PMC4561730 Benjamin Rothé, Catherine N. Leettola, Lucia Leal-Esteban, Duilio Cascio, Simon Fortier, Manuela Isenschmid, James U. Bowie, Daniel B. Constam *Structure*. 2018 Feb 6; 26(2): 209–224.e6. Published online 2017 De

BICD1: Leal-Esteban LC, Rothé B, Fortier S, Isenschmid M, Constam DB. Role of Bicaudal C1 in renal gluconeogenesis and its novel interaction with the CTLH complex. *Barsh GS, ed. PLoS Genetics*. 2018;14(7):e1007487. doi:10.1371/journal.pgen.1007487.



BIN1: Mutations in amphiphysin 2 (BIN1) disrupt interaction with dynamin 2 and cause autosomal recessive centronuclear myopathy. (PMID: 17676042) Nicot AS ... Laporte J Nature genetics 2007 2 3 4 21 70 A Roma founder BIN1 mutation causes a novel phenotype of centronuclear myopathy with rigid spine. (PMID: 29950440) Cabrera-Serrano M ... Paradas C Neurology 2018 3 4 70 Adult-onset autosomal dominant centronuclear myopathy due to BIN1 mutations. (PMID: 25260562) Böhm J ... Laporte J Brain : a journal of neurology 2014 3 4 70 Phenotype of a patient with recessive centronuclear myopathy and a novel BIN1 mutation. (PMID: 20142620) Claeys KG ... Stojkovic T Neurology 2010 3 4 21 The SH3 binding motif of HCV [corrected] NS5A protein interacts with Bin1 and is important for apoptosis and infectivity. (PMID: 16530520) Nanda SK ... Liang TJ Gastroenterology 2006

BMP2: Saxon JG, Baer DR, Barton JA, et al. BMP2 expression in the endocardial lineage is required for AV endocardial cushion maturation and remodeling. Developmental biology. 2017;430(1):113-128. doi:10.1016/j.ydbio.2017.08.008.

BMPR1B: Katja Stange, Julie Désir, Naseebullah Kakar, Thomas D. Mueller, Birgit S. Budde, Christopher T. Gordon, Denise Horn, Petra Seemann, Guntram BorckOrphanet J Rare Dis. 2015; 10: 84. Published online 2015 Jun 24. doi: 10.1186/s13023-015-0299-5PMCID: PMC4482310 Cherry Yin-Yi Chang, Yi Chen, Ming-Tsung Lai, Hui-Wen Chang, Jack Cheng, Carmen Chan, Chih-Mei Chen, Shan-Chih Lee, Ying-Ju Lin, Lei Wan, Pei-Wen Tsai, Su-Han Yang, Ching Chung, Jim Jinn-Chyuan Sheu, Fuu-Jen TsaiPLoS One. 2013.

BMPR2: Myung-Jin Kim, Seon Young Park, Hae Ryung Chang, Eun Young Jung, Anudari Munkhjargal, Jong-Seok Lim, Myeong-Sok Lee, Yonghwan KimBMB Rep. 2017 Jun; 50(6): 308–317. Published online 2017 Jun 30. doi: 10.5483/BMBRep.2017.50.6.059PMCID: PMC5498141 Adam Andruska, Edda SpiekerkoetterInt J Mol Sci. 2018 Sep; 19(9): 2499. Published online 2018 Aug 24. doi: 10.3390/ijms19092499PMCID: PMC6165502 Alexi Crosby, Elaine Soon, Frances M. Jones, Mark R. Southwood, Leila Haghighat, Mark R. Toshner.

BRAP: Shoji S, Hanada K, Ohsawa N, Shirouzu M. Central catalytic domain of BRAP (RNF52) recognizes the types of ubiquitin chains and utilizes oligo-ubiquitin for ubiquitylation. Biochemical Journal. 2017;474(18):3207-3226. doi:10.1042/BCJ20161104.

BRCA1: Zhao W, Steinfeld JB, Liang F, et al. Promotion of RAD51-mediated homologous DNA pairing by BRCA1-BARD1. Nature. 2017;550(7676):360-365. doi:10.1038/nature24060.

BRCA2: Fatemeh Karami, Parvin MehdipourBiomed Res Int. 2013; 2013: 928562. Published online 2013 Nov 7. doi: 10.1155/2013/928562PMCID: PMC3838820 Hermela Shimelis, Romy L.S. Mesman, Catharina Von Nicolai, Asa Ehlen, Lucia Guidugli, Charlotte Martin, Fabienne M.G.R. Calléja, Huong Meeks, Emily Hallberg, Jamie Hinton, Jenna Lilyquist, Chunling Hu, Cora M. Aalfs, Kristiina Aittomäki, Irene Andrulis, Hoda Anton-Culver, Volker Arndt, Matthias W. Beckmann, Javier Benitez, Natalia V. Bogdanova.

BRIP1: Ishita Gupta, Allal Ouhtit, Adil Al-Ajmi, Syed Gauhar A Rizvi, Hamad Al-Riyami, Marwa Al-Riyami, Yahya TamimiEndocr Connect. 2018 Jan; 7(1): 65–77. Published online 2017 Nov 14. doi: 10.1530/EC-17-0173PMCID: PMC5744628 WEI ZOU, XIANGDONG MA, WEI HUA, BILIANG CHEN, YANHONG HUANG, DETANG WANG, GUOQING CAIOncol Lett. 2016 Jan; 11(1): 551–558. Published online 2015 Nov 24. doi: 10.3892/ol.2015.3963PMCID: PMC4727061 Katsutoshi Sato, Mio Koyasu, Sachio Nomura, Yuri Sato, Mizuho Kita, Yuumi Ashiha

BST1: Crystallographic studies on human BST-1/CD157 with ADP-ribosyl cyclase and NAD glycohydrolase activities. (PMID: 11866528) Yamamoto-Katayama S ... Morikawa K Journal of molecular biology 2002 3 4 23 BST-1, a surface molecule of bone marrow stromal cell lines that facilitates pre-B-cell growth. (PMID: 8202488) Kaisho T ... Hirano T Proceedings of the National Academy of Sciences of the United States of America 1994 2 3 4 Imputation of sequence variants for identification of genetic risks for Parkinson's disease: a meta-analysis of genome-wide association studies. (PMID: 21292315) International Parkinson Disease Genomics Consortium ... Wood NW Lancet (London, England) 2011 3 41 Common genetic variation in the HLA region is associated with late-onset sporadic Parkinson's disease. (PMID: 20711177) Hamza TH ... Payami H Nature genetics 2010 3 41 Analysis of GWAS-linked loci in Parkinson disease reaffirms PARK16 as a susceptibility locus. (PMID: 20697102) Tan EK ... Liu JJ Neurology 2010

BTBD9: Allen RP, Donelson NC, Jones BC, et al. Animal models of RLS phenotypes. Sleep medicine. 2017;31:23-28. doi:10.1016/j.sleep.2016.08.002.

Name Sample

Age

Gender

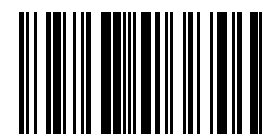
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Report date

12/09/2025

Prescriber

Health insurance



Sample

BTD: Yonggang Xie, Xiaosu Li, Xian Zhang, Shaolin Mei, Hongyu Li, Andreacarola Urso, Sijun ZhueLife. 2014; 3: e03596. Published online 2014 Oct 6. doi: 10.7554/eLife.03596PMCID: PMC4221738Vera S. Hunnekuhl, Michael AkamEvoDevo. 2017; 8: 18. Published online 2017 Oct 23. doi: 10.1186/s13227-017-0082-xPMCID: PMC5654096 Chompunut Lumsangkul, Yang-Kwang Fan, Shen-Chang Chang, Jyh-Cherng Ju, Hsin-I. Chiang PLoS One. 2018; 13(5): e0196973. Published online 2018 May 9. doi: 10.1371/journal.pone.0196973

BTNL2: Xiang Tong, Yao Ma, Xundong Niu, Zhipeng Yan, Sitong Liu, Bo Peng, Shifeng Peng, Hong FanMedicine (Baltimore) 2016 Jul; 95(30): e4325. Published online 2016 Jul 29. doi: 10.1097/MD.0000000000004325PMCID: PMC5265849Krishanthi S. Subramaniam, Emily Spaulding, Emil Ivan, Eugene Mutimura, Ryung S. Kim, Xikui Liu, Chen Dong, Catherine M. Feintuch, Xingxing Zhang, Kathryn Anastos, Gregoire Lauvau, Johanna P. DailyJ Infect Dis. 2015 Oct 15; 212(8): 1322–1331. Published online 2015 Apr 15. doi: 10.

BUD13: Structure of the human activated spliceosome in three conformational states. (PMID: 29360106) Zhang X . Shi Y Cell research 2018 3 4 58 Cooperative structure of the heterotrimeric pre-mRNA retention and splicing complex. (PMID: 25218446) Wysoczanski P . Zweckstetter M Nature structural & molecular biology 2014 2 3 58 A bivariate genome-wide approach to metabolic syndrome: STAMPEED consortium. (PMID: 21386085) Kraja AT . Borecki IB Diabetes 2011 3 45 58 Genome-wide association study of Lp-PL

C12ORF4: Identification of C12orf4 as a gene for autosomal recessive intellectual disability. (PMID: 27311568) Philips AK ... Järvelä I Clinical genetics 2017 2 3 4 Accelerating novel candidate gene discovery in neurogenetic disorders via whole-exome sequencing of prescreened multiplex consanguineous families. (PMID: 25558065) Alazami AM ... Alkuraya FS Cell reports 2015 2 3 4 A novel conserved family of Macro-like domains-putative new players in ADP-ribosylation signaling. (PMID: 31106069) Dudkiewicz M ... Pawłowski K PeerJ 2019 2 3 In-cell intrabody selection from a diverse human library identifies C12orf4 protein as a new player in rodent mast cell degranulation. (PMID: 25122211) Mazuc E ... Martineau P PloS one 2014 2 3 Common genetic variants associate with serum phosphorus concentration. (PMID: 20558539) Kestenbaum B ... Fox CS Journal of the American Society of Nephrology : JASN 2010 3 41

C1ORF106: Mohanan V, Nakata T, Desch AN, et al. C1orf106 is a colitis risk gene that regulates stability of epithelial adherens junctions. Science (New York, NY). 2018;359(6380):1161-1166. doi:10.1126/science.aan0814.

C2: Yun S-H, Sim E-H, Han S-H, et al. In vitro and in vivo anti-leukemic effects of cladoloside C2 are mediated by activation of Fas/ceramide synthase 6/p38 kinase/c-Jun NH2-terminal kinase/caspase-8. Oncotarget. 2018;9(1):495-511. doi:10.18632/oncotarget.230

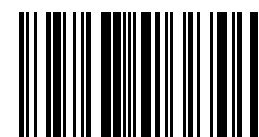
C2CD4C: Han J, Perez JT, Chen C, et al. Genome-wide CRISPR/Cas9 Screen Identifies Host Factors Essential for Influenza Virus Replication. Cell reports. 2018;23(2):596-607. doi:10.1016/j.celrep.2018.03.045.

C3: Elvington M, Liszewski MK, Bertram P, Kulkarni HS, Atkinson JP. A C3(H20) recycling pathway is a component of the intracellular complement system. The Journal of Clinical Investigation. 2017;127(3):970-981. doi:10.1172/JCI89412.

C5: Zhang L, Qiu W, Crooke S, et al. Development of autologous C5 vaccine nanoparticles to reduce intravascular hemolysis in vivo. ACS chemical biology. 2017;12(2):539-547. doi:10.1021/acschembio.6b00994.

C5ORF67: Sarah Wilker, Anna Schneider, Daniela Conrad, Anett Pfeiffer, Christina Boeck, Birke Lingenfelder, Virginie Freytag, Vanja Vukojevic, Christian Vogler, Annette Milnik, Andreas Papassotiropoulos, Dominique J.-F. de Quervain, Thomas Elbert, Stephan Kolassa, Iris-Tatjana KolassaTransl Psychiatry. 2018; 8: 251. Published online 2018 Nov 22. doi: 10.1038/s41398-018-0297-1PMCID: PMC6250662Danfeng Peng, Jie Wang, Rong Zhang, Feng Jiang, Claudia H. T. Tam, Guozhi Jiang, Tao Wang, Miao Chen, Jing Ya

C8ORF34: Hagit N Baris, Wai-Man Chan, Caroline Andrews, Doron M Behar, Diana J Donovan, Cynthia C Morton, Judith Ranells, Tuya Pal, Azra H Ligon, Elizabeth C EngleClin Case Rep. 2013 Oct; 1(1): 30–37. Published online 2013 Sep 30. doi: 10.1002/ccr3.11PMCID: PMC3885256 Jenna C. Carlson, Jennifer Standley, Aline Petrin, John R. Shaffer, Azeez Butali, Carmen J. Buxo, Eduardo Castilla, Kaare Christensen, Frederic W-D Deleyiannis, Jacqueline T. Hecht, L. Leigh Field, Ariuntuul Garidkhuu, Lina M. Moreno



CA1: Sun Y, Nitz DA, Holmes TC, Xu X. Opposing and Complementary Topographic Connectivity Gradients Revealed by Quantitative Analysis of Canonical and Noncanonical Hippocampal CA1 Inputs. *eNeuro*. 2018;5(1):ENEURO.0322-17.2018. doi:10.1523/ENEURO.0322-17.2018.

CA8: Fu ES, Erasso DM, Zhuang GZ, et al. Impact of human CA8 on thermal antinociception in relation to morphine equivalence in mice. *Neuroreport*. 2017;28(18):1215-1220. doi:10.1097/WNR.0000000000000872.

CACNB2: Liu A, Wang Y, Sahana G, et al. Genome-wide Association Studies for Female Fertility Traits in Chinese and Nordic Holsteins. *Scientific Reports*. 2017;7:8487. doi:10.1038/s41598-017-09170-9.

CADM1: Richard Hunte, Patricia Alonso, Remy Thomas, Cassandra Alexandria Bazile, Juan Carlos Ramos, Louise van der Weyden, Juan Dominguez-Bendala, Wasif Noor Khan, Noula Shembade *PLoS Pathog*. 2018 Apr; 14(4): e1006968. Published online 2018 Apr 26. doi: 10.1371/journal.ppat.1006968 PMCID: PMC5919438 Rajeshree Pujari, Richard Hunte, Remy Thomas, Louise van der Weyden, Dan Rauch, Lee Ratner, Jennifer K. Nyborg, Juan Carlos Ramos, Yoshimi Takai, Noula Shembade *PLoS Pathog*. 2015 Mar; 11(3): e1004721.

CALCA: Aydin-Yüce T, Kurscheid G, Bachmann HS, et al. No Association of CALCA Polymorphisms and Aseptic Loosening after Primary Total Hip Arthroplasty. *BioMed Research International*. 2018;2018:3687415. doi:10.1155/2018/3687415.

CALHM1: Vingtdoux V, Chang EH, Frattini SA, et al. CALHM1 deficiency impairs cerebral neuron activity and memory flexibility in mice. *Scientific Reports*. 2016;6:24250. doi:10.1038/srep24250.

CAMK2A: Sébastien Küry, Geeske M. van Woerden, Thomas Besnard, Martina Proietti Onori, Xénia Latypova, Meghan C. Towne, Megan T. Cho, Trine E. Prescott, Melissa A. Ploeg, Stephan Sanders, Holly A.F. Stessman, Aurora Pujol, Ben Distel, Laurie A. Robak, Jonathan A. Bernstein, Anne-Sophie Denommé-Pichon, Gaëtan Lesca, Elizabeth A. Sellars, Jonathan Berg, Wilfrid Carré, Øyvind Løvold Busk, Bregje W.M. van Bon, Jeff L. Waugh, Matthew Deardorff, George E. Hoganson, Katherine B. Bosanko, Diana S. Johnson

CAPN10: Tomohisa Hatta, Shun-ichiro Iemura, Tomokazu Ohishi, Hiroshi Nakayama, Hiroyuki Seimiya, Takao Yasuda, Katsumi Iizuka, Mitsunori Fukuda, Jun Takeda, Tohru Natsume, Yukio Horikawa *Sci Rep*. 2018; 8: 16756. Published online 2018 Nov 13. doi: 10.1038/s41598-018-35204-x PMCID: PMC6233169 Nattachet Plengvidhya, Kanjana Chanprasert, Watip Tangjittipokin, Wanna Thongnoppakhun, Pa-thai Yenchitsomanus *J Diabetes Investig*. 2015 Nov; 6(6): 632–639. Published online 2015 Mar 24. doi: 10.1111/jdi.12341 PMCID:

CAPZB: Sequence analysis and chromosomal localization of human Cap Z. Conserved residues within the actin-binding domain may link Cap Z to gelsolin/severin and profilin protein families. (PMID: 7665558) Barron-Casella EA . Casella JF *The Journal of biological chemistry* 1995 3 4 23 58 Dereglulation of CRAD-controlled cytoskeleton initiates mucinous colorectal cancer via β -catenin. (PMID: 30361697) Jung YS . Park JI *Nature cell biology* 2018 3 4 58 A recurrent de novo mutation in ACTG1 causes isolated

CARS: Gebru T, Krause J, Wang Y, et al. Using deep learning and Google Street View to estimate the demographic makeup of neighborhoods across the United States. *Proceedings of the National Academy of Sciences of the United States of America*. 2017;114(50):13108-

CASC16: Han Y-J, Zhang J, Zheng Y, Huo D, Olopade OI. Genetic and Epigenetic Regulation of TOX3 Expression in Breast Cancer. Suzuki H, ed. *PLoS ONE*. 2016;11(11):e0165559. doi:10.1371/journal.pone.0165559.

CASC17: Jackson VE, Latourelle JC, Wain LV, et al. Meta-analysis of exome array data identifies six novel genetic loci for lung function. *Wellcome Open Research*. 2018;3:4. doi:10.12688/wellcomeopenres.12583.3.

CASC21: Li W, Qi Y, Cui X, et al. Characteristic of HPV Integration in the Genome and Transcriptome of Cervical Cancer Tissues. *BioMed Research International*. 2018;2018:6242173. doi:10.1155/2018/6242173.

Name	Sample		
Age		Gender	F
		Report date	12/09/2025
Prescriber	Health insurance		



CASC8: Hu L, Chen S-H, Lv Q-L, et al. Clinical Significance of Long Non-Coding RNA CASC8 rs10505477 Polymorphism in Lung Cancer Susceptibility, Platinum-Based Chemotherapy Response, and Toxicity. Tchounwou PB, ed. International Journal of Environmental Research and Public Health. 2016;13(6):545. doi:10.3390/ijerph13060545.

CASP8: Dominguez S, Montgomery AB, Haines GK, Bloomfield CL, Cuda CM. The caspase-8/RIPK3 signaling axis in antigen presenting cells controls the inflammatory arthritic response. Arthritis Research & Therapy. 2017;19:224. doi:10.1186/s13075-017-1436-4.

CASR: Tang L, Jiang L, McIntyre ME, Petrova E, Cheng SX. Calcimimetic acts on enteric neuronal CaSR to reverse cholera toxin-induced intestinal electrolyte secretion. Scientific Reports. 2018;8:7851. doi:10.1038/s41598-018-26171-4.

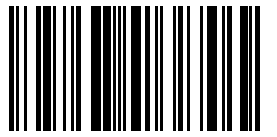
CASZ1: Zhihui Liu, Wenling Li, Xuefei Ma, Nancy Ding, Francesco Spallotta, Eileen Southon, Lino Tessarollo, Carlo Gaetano, Yoh-suke Mukouyama, Carol J. ThieleJ Biol Chem. 2014 Oct 24; 289(43): 29801–29816. Published online 2014 Sep 4. doi: 10.1074/jbc.M114.570416 PMID: PMC4207993 Natarajan Bhaskaran, Zhihui Liu, Senthil S. Saravanamuthu, Chunhua Yan, Ying Hu, Lijin Dong, Peggy Zelenka, Lixin Zheng, Vassili Bletsos, Rachel Harris, Brenna Harrington, Aaron Weinberg, Carol J. Thiele, Fengchun Ye

CAT: Gene polymorphisms in association with emerging cardiovascular risk markers in adult women. (PMID: 20078877) Fan AZ ... Mokdad AH BMC medical genetics 2010 3 21 39 Polymorphisms in antioxidant defence genes and susceptibility to hepatocellular carcinoma in a Moroccan population. (PMID: 19929244) Ezzikouri S ... Benjelloun S Free radical research 2010 3 21 39 [Lack of association between metabolic and antioxidant gene polymorphisms (GSTM1, GSTT1, CAT, MnSOD, GPX1) and maternal quitting of smoking in pregnancy--preliminary results]. (PMID: 20301895) Hozyasz KK ... Jagodziński PP Przegląd lekarski 2009 3 21 39 [Association of genetic factors with clinical peculiarities of hypertensive disease in patients with burdened familial anamnesis]. (PMID: 19254215) Minushkina LO ... Zateřshchikov DA Kardiologiiia 2009 3 21 39 Functional variants in the catalase and myeloperoxidase genes, ambient air pollution, and respiratory-related school absences: an example of epistasis in gene-environment interactions. (PMID: 19897513) Wenten M ... Gilliland FD American journal of epidemiology 2009

CAV3: Irano N, de Camargo GMF, Costa RB, et al. Genome-Wide Association Study for Indicator Traits of Sexual Precocity in Nellore Cattle. Zhang Q, ed. PLoS ONE. 2016;11(8):e0159502. doi:10.1371/journal.pone.0159502.

CBLB: Xiao Y, Tang J, Guo H, et al. Targeting CBLB as a Potential Therapeutic Approach for Disseminated Candidiasis. Nature medicine. 2016;22(8):906-914. doi:10.1038/nm.4141.





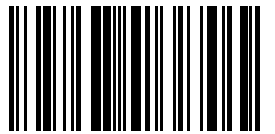
CBS: The cystathionine beta-synthase (CBS) mutation c.1224-2A>C in Central Europe: Vitamin B6 nonresponsiveness and a common ancestral haplotype. (PMID: 15365998) Linnebank M ... Koch HG Human mutation 2004 3 4 21 39 69 A pathogenic linked mutation in the catalytic core of human cystathionine beta-synthase disrupts allosteric regulation and allows kinetic characterization of a full-length dimer. (PMID: 17352495) Sen S ... Banerjee R Biochemistry 2007 3 21 24 69 Cystathionine beta-synthase T833C/844INS68 polymorphism: a family-based study on mentally retarded children. (PMID: 16375773) Dutta S ... Mukhopadhyay K Behavioral and brain functions : BBF 2005 3 21 39 69 High homocysteine and thrombosis without connective tissue disorders are associated with a novel class of cystathionine beta-synthase (CBS) mutations. (PMID: 12007221) Maclean KN ... Kraus JP Human mutation 2002 3 4 21 69 High prevalence of the I278T mutation of the human cystathionine beta-synthase detected by a novel screening application. (PMID: 11434706) Linnebank M ... Koch HG Thrombosis and haemostasis 2001 N-Terminal Acetyltransferase Naa40p Whereabouts Put into N-Terminal Proteoform Perspective. (PMID: 33916271) Jonckheere V ... Van Damme P International journal of molecular sciences 2021 3 Reprogrammed transsulfuration promotes basal-like breast tumor progression via realigning cellular cysteine persulfidation. (PMID: 34737229) Erdélyi K ... Nagy P Proceedings of the National Academy of Sciences of the United States of America 2021 3 Association of maternal dietary intakes and CBS gene polymorphisms with congenital heart disease in offspring. (PMID: 32800907) Li Y ... Qin J International journal of cardiology 2021 3 Derangement of hepatic polyamine, folate, and methionine cycle metabolism in cystathionine beta-synthase-deficient homocystinuria in the presence and absence of treatment: Possible implications for pathogenesis. (PMID: 33483253) Maclean KN ... Stabler SP Molecular genetics and metabolism 2021 3 Parental exome analysis identifies shared carrier status for a second recessive disorder in couples with an affected child. (PMID: 33223529) Mor-Shaked H ... Harel T European journal of human genetics : EJHG 2021 Systems analysis of RhoGEF and RhoGAP regulatory proteins reveals spatially organized RAC1 signalling from integrin adhesions. (PMID: 32203420) Müller PM ... Rocks O Nature cell biology 2020 3 Wnt regulation: exploring Axin-Disheveled interactions and defining mechanisms by which the SCF E3 ubiquitin ligase is recruited to the destruction complex. (PMID: 32129710) Schaefer KN ... Peifer M Molecular biology of the cell 2020 The midbody interactome reveals unexpected roles for PP1 phosphatases in cytokinesis. (PMID: 31586073) Capalbo L ... D'Avino PP Nature communications 2019 3 Gain of Additional BIRC3 Protein Functions through 3'-UTR-Mediated Protein Complex Formation. (PMID: 30948266) Lee SH ... Mayr C Molecular cell 2019 3 Extensive disruption of protein interactions by genetic variants across the allele frequency spectrum in human populations. (PMID: 31515488) Fragoza R ... Yu H Nature communications 2019 3 PLEKHA4/kramer Attenuates Dishevelled Ubiquitination to Modulate Wnt and Planar Cell Polarity Signaling. (PMID: 31091453) Shami Shah A ... Baskin JM Cell reports 2019 3 WWP2 ubiquitylates RNA polymerase II for DNA-PK-dependent transcription arrest and repair at DNA breaks. (PMID: 31048545) Caron P ... van Attikum H Genes & development 2019

CCDC33: Paula L. Hyland, Neal D. Freedman, Nan Hu, Ze-Zhong Tang, Lemin Wang, Chaoyu Wang, Ti Ding, Jin-Hu Fan, You-Lin Qiao, Asieh Golozar, William Wheeler, Kai Yu, Jeff Yuenger, Laurie Burdett, Stephen J. Chanock, Sanford M. Dawsey, Margaret A. Tucker, Alisa M. Goldstein, Christian C. Abnet, Philip R. Taylor Carcinogenesis. 2013 May; 34(5): 1062–1068. Published online 2013 Jan 28. doi: 10.1093/carcin/bgt030 PMID: PMC3643422 Arnon Mazza, Irit Gat-Viks, Hesso Farhan, Roded Sharan Algorithms Mol Biol

CCDC40: Dinu Antony, Anita Becker-Heck, Maimoona A Zariwala, Miriam Schmidts, Alexandros Onoufriadis, Mitra Forouhan, Robert Wilson, Theresa Taylor-Cox, Ann Dewar, Claire Jackson, Patricia Goggin, Niki T Loges, Heike Olbrich, Martine Jaspers, Mark Jorissen, Margaret W Leigh, Whitney E Wolf, M. Leigh Anne Daniels, Peader G Noone, Thomas W Ferkol, Scott D Sagel, Margaret Rosenfeld, Andrew Rutman, Abhijit Dixit, Christopher O'Callaghan, Jane S Lucas, Claire Hogg, Peter J Scambler, Richard D Emes, UK10

CCDC62: Lu Y, Tan L, Shen N, et al. Possible association of CCDC62 rs12817488 polymorphism and Parkinson's disease risk in Chinese population: a meta-analysis. Scientific Reports. 2016;6:23991. doi:10.1038/srep23991.

CCDC77: Maria Barandalla, Hui Shi, Hui Xiao, Silvia Colleoni, Cesare Galli, Pietro Lio, Matthew Trotter, Giovanna Lazzari Stem Cell Res Ther. 2017; 8: 160. Published online 2017 Jul 5. doi: 10.1186/s13287-017-0602-6 PMID: PMC5497375 Lei Wei, Song Liu, Jeffrey Conroy, Jianmin Wang, Antonios Papanicolau-Sengos, Sean T. Glenn, Mitsuko Murakami, Lu Liu, Qiang Hu, Jacob Conroy, Kiersten Marie Miles, David E. Nowak, Biao Liu, Maochun Qin, Wiam Bshara, Angela R. Omilian, Karen Head, Michael Bianchi.



CCHCR1: Tervaniemi MH, Katayama S, Skoog T, et al. Intracellular signalling pathways and cytoskeletal functions converge on the psoriasis candidate gene CCHCR1 expressed at P-bodies and centrosomes. BMC Genomics. 2018;19:432. doi:10.1186/s12864-018-4810-y.

CCK: Polymorphisms of the cholecystokinin gene promoter region in suicide victims in Japan. (PMID: 15837012) Shindo S . Yoshioka N Forensic science international 2005 3 23 43 56 Cholecystokinin (CCK) and the CCKA receptor gene polymorphism, and smoking behavior. (PMID: 15740988) Takimoto T . Iwahashi K Psychiatry research 2005 3 23 43 56 Cholecystokinin, cholecystokinin-A receptor and cholecystokinin-B receptor gene polymorphisms in Parkinson's disease. (PMID: 12777967) Wang J . Yu L Pharmacogen

CCL2: Yaeli Lebel-Haziv, Tsipi Meshel, Gali Soria, Adva Yeheskel, Elad Mamon, Adit Ben-BaruchNeoplasia. 2014 Sep; 16(9): 723–740. Published online 2014 Sep 20. doi: 10.1016/j.neo.2014.08.004PMCID: PMC4234876Nicole Lavender, Jinming Yang, Sheau-Chiann Chen, Jiqing Sai, C. Andrew Johnson, Philip Owens, Gregory D. Ayers, Ann RichmondBMC Cancer. 2017; 17: 88. Published online 2017 Jan 31. doi: 10.1186/s12885-017-3074-2PMCID: PMC5286656Vincent R. Parillaud, Guillaume Lornet, Yann Monnet, Anne-Laure Pr

CCNE1: Zhao H, Wang J, Zhang Y, et al. Prognostic Values of CCNE1 Amplification and Overexpression in Cancer Patients: A Systematic Review and Meta-analysis. Journal of Cancer. 2018;9(13):2397-2407. doi:10.7150/jca.24179.

CCR3: Zhu X, Liu K, Wang J, et al. C-C chemokine receptor type 3 gene knockout alleviates inflammatory responses in allergic rhinitis model mice by regulating the expression of eosinophil granule proteins and immune factors. Molecular Medicine Reports. 2018;18(4):3780-3790. doi:10.3892/mmr.2018.9380.

CD2AP: CD2AP mutations are associated with sporadic nephrotic syndrome and focal segmental glomerulosclerosis (FSGS). (PMID: 19131354) Gigante M . Gesualdo L Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association 2009 3 23 45 58 CD2AP and Cbl-3/Cbl-c constitute a critical checkpoint in the regulation of ret signal transduction. (PMID: 18753381) Tsui CC . Pierchala BA The Journal of neuroscience : the official jo

CD36: Okuda K, Tong M, Dempsey B, Moore KJ, Gazzinelli RT, Silverman N.Leishmania amazonensis Engages CD36 to Drive Parasitophorous Vacuole Maturation. Zamboni DS, ed. PLoS Pathogens. 2016;12(6):e1005669. doi:10.1371/journal.ppat.1005669.

CD38: A missense mutation in the CD38 gene, a novel factor for insulin secretion: association with Type II diabetes mellitus in Japanese subjects and evidence of abnormal function when expressed in vitro. (PMID: 9754820) Yagui K ... Kanatsuka A Diabetologia 1998 3 4 23 41 Human gene encoding CD38 (ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase): organization, nucleotide sequence and alternative splicing. (PMID: 9074508) Nata K ... Okamoto H Gene 1997 2 3 4 23 Isolation of a cDNA encoding the human CD38 (T10) molecule, a cell surface glycoprotein with an unusual discontinuous pattern of expression during lymphocyte differentiation. (PMID: 2319135) Jackson DG ... Bell JI Journal of immunology (Baltimore, Md. : 1950) 1990 2 3 4 23 CD38 gene polymorphisms contribute to genetic susceptibility to B-cell chronic lymphocytic leukemia: evidence from two case-control studies in Polish Caucasians. (PMID: 19240243) Jamroziak K ... Robak T Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology 2009 3 23 41 CD38 gene polymorphism and chronic lymphocytic leukemia: a role in transformation to Richter syndrome? (PMID: 18424664) Aydin S ... Deaglio S Blood 2008

CD46: Mutations in alternative pathway complement proteins in American patients with atypical hemolytic uremic syndrome. (PMID: 20513133) Maga TK . Smith RJ Human mutation 2010 3 4 45 58 Genetics of HUS: the impact of MCP, CFH, and IF mutations on clinical presentation, response to treatment, and outcome. (PMID: 16621965) Caprioli J . International Registry of Recurrent and Familial HUS/TTP Blood 2006 3 4 45 58 Localization of regions in CD46 that interact with adenovirus. (PMID: 15919905) Gaggar

CD58: Sable R, Durek T, Taneja V, et al. Constrained Cyclic Peptides as Immunomodulatory Inhibitors of the CD2:CD58 Protein-Protein Interaction. ACS chemical biology. 2016;11(8):2366-2374. doi:10.1021/acscchembio.6b00486.

CD86: Levy R, Rotfogel Z, Hillman D, et al. Superantigens hyperinduce inflammatory cytokines by enhancing the B7-2/CD28 costimulatory receptor interaction. Proceedings of the National Academy of Sciences of the United States of America. 2016;113(42):E6437-E6446

Name	Sample		
Age	Gender	F	Report date
Prescriber		Health insurance	
12/09/2025			



CDAN1: Congenital dyserythropoietic anemia type I is caused by mutations in codanin-1. (PMID: 12434312) Dgany O . Tamary H American journal of human genetics 2002 2 3 4 23 58 Codanin-1, mutated in the anaemic disease CDAI, regulates Asf1 function in S-phase histone supply. (PMID: 22407294) Ask K . Groth A The EMBO journal 2012 3 4 58 Codanin-1 mutations in congenital dyserythropoietic anemia type 1 affect HP1{alpha} localization in erythroblasts. (PMID: 21364188) Renella R . Wood WG Blood 2011 3 4

CDCA3: Drug target discovery by gene expression analysis: cell cycle genes. (PMID: 12188893) Walker MG Current cancer drug targets 2001 Large-scale sequencing in human chromosome 12p13: experimental and computational gene structure determination. (PMID: 9074930) Ansari-Lari MA ... Gibbs RA Genome research 1997 2 3 4 Identification of type 2 diabetes-associated combination of SNPs using support vector machine. (PMID: 20416077) Ban HJ ... Park KJ BMC genetics 2010 3 40 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T ... Sugano S Nature genetics 2004 3 4 Comprehensive interactome profiling of the human Hsp70 network highlights functional differentiation of J domains. (PMID: 33957083) Piette BL ... Taipale M Molecular

CDH1: Van der Post RS, Vogelaar IP, Carneiro F, et al. Hereditary diffuse gastric cancer: updated clinical guidelines with an emphasis on germline CDH1mutation carriers. Journal of Medical Genetics. 2015;52(6):361-374. doi:10.1136/jmedgenet-2015-103094.

CDH12: Junjun Ma, Jingkun Zhao, Jun Lu, Puxiongzhi Wang, Hao Feng, Yaping Zong, Baochi Ou, Minhua Zheng, Aiguo LuTumour Biol. 2016 Jul; 37(7): 9077–9088. Published online 2016 Jan 14. doi: 10.1007/s13277-015-4555-zPMCID: PMC4990612Jingkun Zhao, Pu Li, Hao Feng, Puxiongzhi Wang, Yaping Zong, Junjun Ma, Zhuo Zhang, Xuehua Chen, Minhua Zheng, Zhenggang Zhu, Aiguo LuJ Transl Med. 2013; 11: 288. Published online 2013 Nov 15. doi: 10.1186/1479-5876-11-288PMCID: PMC3879717Eiji Matsunaga, Sanae Nambu, Mar

CDH13: Abigail C. Killen, Melissa Barber, Joshua J. W. Paulin, Barbara Ranscht, John G. Parnavelas, William D. AndrewsBrain Struct Funct. 2017; 222(8): 3567–3585. Published online 2017 Apr 6. doi: 10.1007/s00429-017-1418-yPMCID: PMC5676827Andrea Forero, Olga Rivero, Sina Wäldchen, Hsing-Ping Ku, Dominik P. Kiser, Yvonne Gärtner, Laura S. Pennington, Jonas Waider, Patricia Gaspar, Charline Jansch, Frank Edenhofer, Thérèse J. Resink, Robert Blum, Markus Sauer, Klaus-Peter LeschFront Cell Neurosci. 2

CDHR3: Kelly Watters, Ann C. PalmenbergPLoS Pathog. 2018 Dec; 14(12): e1007477. Published online 2018 Dec 10. doi: 10.1371/journal.ppat.1007477PMCID: PMC6301718Yury A. Bochkov, Kelly Watters, Shamaila Ashraf, Theodor F. Griggs, Mark K. Devries, Daniel J. Jackson, Ann C. Palmenberg, James E. GernProc Natl Acad Sci U S A. 2015 Apr 28; 112(17): 5485–5490. Published online 2015 Apr 6. doi: 10.1073/pnas.1421178112PMCID: PMC4418890 Klaus Bønnelykke, Amaziah T. Coleman, Michael D. Evans, Jonathan Thorsen

CDK6: Karoline Kollmann, Gerwin Heller, Christine Schneckenleithner, Wolfgang Warsch, Ruth Scheicher, Rene G. Ott, Markus Schäfer, Sabine Fajmann, Michaela Schlederer, Ana-Iris Schiefer, Ursula Reichart, Matthias Mayerhofer, Christoph Hoeller, Sabine Zöchbauer-Müller, Donscho Kerjaschki, Christoph Bock, Lukas Kenner, Gerald Hoefler, Michael Freissmuth, Anthony R. Green, Richard Moriggl, Meinrad Busslinger, Marcos Malumbres, Veronika Sexl Cancer Cell. 2013 Aug 12; 24(2): 167–181. doi: 10.1016/j.c

CDKAL1: Palmer CJ, Bruckner RJ, Paulo JA, et al. Cdkal1, a type 2 diabetes susceptibility gene, regulates mitochondrial function in adipose tissue. Molecular Metabolism. 2017;6(10):1212-1225. doi:10.1016/j.molmet.2017.07.013.

CDKN1A: Kreis N-N, Friemel A, Zimmer B, et al. Mitotic p21Cip1/CDKN1A is regulated by cyclin-dependent kinase 1 phosphorylation. Oncotarget. 2016;7(31):50215-50228. doi:10.18632/oncotarget.10330.

CDKN1B: Peschel I, Podmirseg SR, Taschler M, et al. FLT3 and FLT3-ITD phosphorylate and inactivate the cyclin-dependent kinase inhibitor p27Kip1 in acute myeloid leukemia. Haematologica. 2017;102(8):1378-1389. doi:10.3324/haematol.2016.160101.

CDKN2A: Gan Y, Ma W, Wang X, et al. Coordinated transcription of ANRIL and P16genes is silenced by P16 DNA methylation . Chinese Journal of Cancer Research. 2018;30(1):93-103. doi:10.21147/j.issn.1000-9604.2018.01.10.



Name Sample

Age

Gender

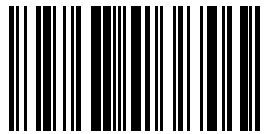
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

CDKN2A/B: Kong Y, Sharma RB, Nwosu BU, Alonso LC. Islet biology, the CDKN2A/B locus and type 2 diabetes risk. *Diabetologia*. 2016;59(8):1579-1593. doi:10.1007/s00125-016-3967-7.

CDKN2B-AS1: ?ehime Gülsün Temel, Mahmut Çerkez Ergören *Anatol J Cardiol*. 2019 Jan; 21(1): 31–38. Published online 2018 Dec 7. doi: 10.14744/AnatolJCardiol.2018.90907 PMID: PMC6382903 Louis R. Pasquale, Stephanie J. Loomis, Jae H. Kang, Brian L. Yaspan, Wael Abdrabou, Donald L. Budenz, Teresa C. Chen, Elizabeth DelBono, David S. Friedman, Douglas Gaasterland, Terry Gaasterland, Cynthia L. Grosskreutz, Richard K. Lee, Paul R. Lichter, Yutao Liu, Catherine A. McCarty, Sayoko E. Moroi, Lana M. Olson.

CEBPA: CCAAT/enhancer-binding protein alpha (CEBPA) polymorphisms and mutations in healthy individuals and in patients with peripheral artery disease, ischaemic heart disease and hyperlipidaemia. (PMID: 20492756) Fuchs O ... Chochola M *Folia biologica* 2010 3 23 41 54 Somatic CEBPA mutations are a frequent second event in families with germline CEBPA mutations and familial acute myeloid leukemia. (PMID: 18768433) Pabst T ... Mueller BU *Journal of clinical oncology : official journal of the American Society of Clinical Oncology* 2008 3 23 41 54 CEBPA polymorphisms and mutations in patients with acute myeloid leukemia, myelodysplastic syndrome, multiple myeloma and non-Hodgkin's lymphoma. (PMID: 18182175) Fuchs O ... Benesova K *Blood cells, molecules & diseases* 2008 3 23 41 54 Prevalence, clinical profile, and prognosis of NPM mutations in AML with normal karyotype. (PMID: 16046528) Boissel N ... Preudhomme C *Blood* 2005 3 23 41 54 CEBPA point mutations in hematological malignancies. (PMID: 15674366) Leroy H ... Preudhomme C *Leukemia* 2005

CEBPB-AS1: Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. (PMID: 16344560) Kimura K ... Sugano S *Genome research* 2006

CELF2: Sandya Ajith, Matthew R. Gazzara, Brian S. Cole, Ganesh Shankarling, Nicole M. Martinez, Michael J. Mallory, Kristen W. Lynch *RNA Biol*. 2016 Jun; 13(6): 569–581. Published online 2016 Apr 20. doi: 10.1080/15476286.2016.1176663 PMID: PMC4962813 Michael J. Mallory, Samuel J. Allon, Jinsong Qiu, Matthew R. Gazzara, Iulia Tapescu, Nicole M. Martinez, Xiang-Dong Fu, Kristen W. Lynch *Proc Natl Acad Sci U S A*. 2015 Apr 28; 112(17): E2139–E2148. Published online 2015 Apr 13. doi: 10.1073/pnas.1423695

CELSR2: Chen Z, Lei Y, Cao X, et al. Genetic analysis of Wnt/PCP genes in neural tube defects. *BMC Medical Genomics*. 2018;11:38. doi:10.1186/s12920-018-0355-9.

CETP: Deguchi H, Banerjee Y, Elias DJ, Griffin JH. Elevated CETP Lipid Transfer Activity is Associated with the Risk of Venous Thromboembolism. *Journal of Atherosclerosis and Thrombosis*. 2016;23(10):1159-1167. doi:10.5551/jat.32201.

CFB: Wolfram G Brenner, Jan Erik Leuendorf, Anne Cortleven, Laetitia B B Martin, Hubert Schaller, Thomas Schmülling *J Exp Bot*. 2017 May 17; 68(11): 2769–2785. Published online 2017 May 12. doi: 10.1093/jxb/erx146 PMID: PMC5853388 Gloriane Schnabolk, Beth Coughlin, Kusumam Joseph, Kannan Kunchithapautham, Mausumi Bandyopadhyay, Elizabeth C. O'Quinn, Tamara Nowling, Bärbel Rohrer *Invest Ophthalmol Vis Sci*. 2015 Mar; 56(3): 1850–1863. Published online 2015 Mar 17. doi: 10.1167/iovs.14-15910

CFH: Kerr H, Wong E, Makou E, et al. Disease-linked mutations in factor H reveal pivotal role of cofactor activity in self-surface-selective regulation of complement activation. *The Journal of Biological Chemistry*. 2017;292(32):13345-13360. doi:10.1074/jbc.M11

CFI: Hupp JR, Despins AW, McCormick JR, Armstrong G, Kreutzer DL. Elevation of Serum Chemotactic Factor Inactivator Activity in Rabbits Induced by Inflammation and Chemotactic Factor. *The American Journal of Pathology*. 1982;109(3):277-282.

CHAT: Chen E, Lallai V, Sherfat Y, et al. Altered Baseline and Nicotine-Mediated Behavioral and Cholinergic Profiles in ChAT-Cre Mouse Lines. *The Journal of Neuroscience*. 2018;38(9):2177-2188. doi:10.1523/JNEUROSCI.1433-17.2018.

CHDH: McClatchie T, Meredith M, Ouédraogo MO, et al. Betaine is accumulated via transient choline dehydrogenase activation during mouse oocyte meiotic maturation. *The Journal of Biological Chemistry*. 2017;292(33):13784-13794. doi:10.1074/jbc.M117.803080.

CHEK2: Luo L, Gao W, Wang J, et al. Study on the Mechanism of Cell Cycle Checkpoint Kinase 2 (CHEK2) Gene Dysfunction in Chemotherapeutic Drug Resistance of Triple Negative Breast Cancer Cells. *Medical Science Monitor?: International Medical Journal of Experimen*

Name Sample

Age

Gender

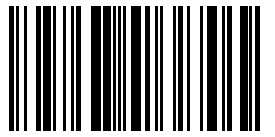
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Report date

12/09/2025

Prescriber

Health insurance



Sample

CHKA: Differential role of human choline kinase alpha and beta enzymes in lipid metabolism: implications in cancer onset and treatment. (PMID: 19915674) Gallego-Ortega D ... Lacal JC PloS one 2009 3 4 23 Structure and function of choline kinase isoforms in mammalian cells. (PMID: 15003397) Aoyama C ... Ishidate K Progress in lipid research 2004 2 3 23 Cloning of a human choline kinase cDNA by complementation of the yeast cki mutation. (PMID: 1618328) Hosaka K ... Yamashita S FEBS letters 1992 2 3 4 Crystal structures of human choline kinase isoforms in complex with hemicholinium-3: single amino acid near the active site influences inhibitor sensitivity. (PMID: 20299452) Hong BS ... Park HW The Journal of biological chemistry 2010 3 4 Polymorphisms located in the region containing BHMT and BHMT2 genes as maternal protective factors for orofacial clefts. (PMID: 20662904) Mostowska A ... Jagodzinski PP European journal of oral sciences 2010

CHKB: Zhuo Li, Gengshu Wu, Roger B. Sher, Zohreh Khavandgar, Martin Hermansson, Gregory A. Cox, Michael R. Doschak, Monzur Murshed, Frank Beier, Dennis E. Vance Biochim Biophys Acta. Author manuscript; available in PMC 2015 Jul 1. Published in final edited form as: Biochim Biophys Acta. 2014 Jul; 1840(7): 2112–2122. Published online 2014 Mar 14. doi: 10.1016/j.bbagen.2014.03.008 PMID: PMC4143985 Sultan Cingoz, Sinem Agilkaya, Ibrahim Oztura, Secil Eroglu, Derya Karadeniz, Ahmet Evlice, Oguz Altungoz

CHRD1: Pei Y, Zhang Y, Lei Y, Wu D, Ma T, Liu X. Hypermethylation of the CHRD1 promoter induces proliferation and metastasis by activating Akt and Erk in gastric cancer. Oncotarget. 2017;8(14):23155-23166. doi:10.18632/oncotarget.15513.

CHRM2: Sakata K, Overacre AE. Promoter IV-BDNF deficiency disturbs cholinergic gene expression of CHRNA5, CHRM2, and CHRM5: effects of drug and environmental treatments. Journal of neurochemistry. 2017;143(1):49-64. doi:10.1111/jnc.14129.

CHRNA5: Tyndale RF, Zhu AZX, George TP, et al. Lack of Associations of CHRNA5-A3-B4 Genetic Variants with Smoking Cessation Treatment Outcomes in Caucasian Smokers despite Associations with Baseline Smoking. Wei Q-Y, ed. PLoS ONE. 2015;10(5):e0128109. doi:10.1371

CHST12: Sasha Z. Prisco, Jeremy W. Prokop, Allison B. Sarkis, Nan Cher Yeo, Matthew J. Hoffman, Colin C. Hansen, Howard J. Jacob, Michael J. Flister, Jozef Lazar Hypertension. Author manuscript; available in PMC 2015 Oct 1. Published in final edited form as: Hypertension. 2014 Oct; 64(4): 883–890. Published online 2014 Jul 7. doi: 10.1161/HYPERTENSIONAHA.114.03550 PMID: PMC4162822 Sasha Z. Prisco, Jessica R. C. Priestley, Brian D. Weinberg, Anthony R. Prisco, Matthew J. Hoffman, Howard J. Jacob.

CILP2: Cartilage intermediate layer protein 2 (CILP-2) is expressed in articular and meniscal cartilage and down-regulated in experimental osteoarthritis. (PMID: 21880736) Bernardo BC . Bateman JF The Journal of biological chemistry 2011 2 3 4 58 One of two chondrocyte-expressed isoforms of cartilage intermediate-layer protein functions as an insulin-like growth factor 1 antagonist. (PMID: 12746903) Johnson K . Terkeltaub R Arthritis and rheumatism 2003 3 4 23 58 Fine-mapping in African Americans

CLCN6: Yamamoto T, Shimojima K, Sangu N, et al. Single Nucleotide Variations in CLCN6 Identified in Patients with Benign Partial Epilepsies in Infancy and/or Febrile Seizures. Ishii R, ed. PLoS ONE. 2015;10(3):e0118946. doi:10.1371/journal.pone.0118946.

CLEC16A: Redmann V, Lamb CA, Hwang S, et al. Clec16a is Critical for Autolysosome Function and Purkinje Cell Survival. Scientific Reports. 2016;6:23326. doi:10.1038/srep23326.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



CLOCK: Molecular cloning and characterization of the human CLOCK gene: expression in the suprachiasmatic nuclei. (PMID: 10198158) Steeves TD ... Takahashi JS Genomics 1999 2 3 4 21 Genetic variants in human CLOCK associate with total energy intake and cytokine sleep factors in overweight subjects (GOLDN population). (PMID: 19888304) Garaulet M ... Ordovas JM European journal of human genetics : EJHG 2010 3 21 39 Differential association of circadian genes with mood disorders: CRY1 and NPAS2 are associated with unipolar major depression and CLOCK and VIP with bipolar disorder. (PMID: 20072116) Soria V ... Urretavizcaya M Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology 2010 3 21 39 CLOCK gene is implicated in weight reduction in obese patients participating in a dietary programme based on the Mediterranean diet. (PMID: 20065968) Garaulet M ... Ordovas JM International journal of obesity (2005) 2010 3 21 39 Testing the circadian gene hypothesis in prostate cancer: a population-based case-control study. (PMID: 19934327) Zhu Y ... Stanford JL Cancer research 2009 Dual proteome-scale networks reveal cell-specific remodeling of the human interactome. (PMID: 33961781) Huttlin EL ... Gygi SP Cell 2021 3 For whom the circadian clock ticks? Investigation of PERIOD and CLOCK gene variants in bipolar disorder. (PMID: 34112033) Yegin Z ... Koc H Chronobiology international 2021 3 Daily Rhythm of Fractal Cardiac Dynamics Links to Weight Loss Resistance: Interaction with CLOCK 3111T/C Genetic Variant. (PMID: 34371977) Yang HW ... Hu K Nutrients 2021 3 Stabilization of heterochromatin by CLOCK promotes stem cell rejuvenation and cartilage regeneration. (PMID: 32737416) Liang C ... Liu GH Cell research 2021 3 Variants in clock genes could be associated with lower risk of type 2 diabetes in an elderly Greek population. (PMID: 34674804) Tsekmekidou X ... Kotsa K Maturitas 2021

CLPTM1L: Puskás LG, Mán I, Szebeni G, Tiszlavicz L, Tsai S, James MA. Novel Anti-CRR9/CLPTM1L Antibodies with Antitumorigenic Activity Inhibit Cell Surface Accumulation, PI3K Interaction, and Survival Signaling. Molecular cancer therapeutics. 2016;15(5):985-997. d

CLSTN2: Tatiana V Lipina, Tuhina Prasad, Daisaku Yokomaku, Lin Luo, Steven A Connor, Hiroshi Kawabe, Yu Tian Wang, Nils Brose, John C Roder, Ann Marie CraigNeuropsychopharmacology. 2016 Feb; 41(3): 802–810. Prepublished online 2015 Jul 14. Published online 2015 Aug 12. doi: 10.1038/npp.2015.206 PMCID: PMC4707826 Gemma de Ramon Francàs, Tobias Alther, Esther T. StoeckliFront Neuroanat. 2017; 11: 76. Published online 2017 Aug 30. doi: 10.3389/fnana.2017.00076 PMCID: PMC5582071 Leslie K. Jacobsen.

CLU: Pseudoexfoliation and Alzheimer's associated CLU risk variant, rs2279590, lies within an enhancer element and regulates CLU, EPHX2 and PTK2B gene expression. Padhy B, Hayat B, Nanda GG, Mohanty PP, Alone DP. Hum Mol Genet. 2017 Nov 15;26(22):4519-4529. doi: 10.1093/hmg/ddx329. PMID: 28973302

CLYBL: The Human Knockout Gene CLYBL Connects Itaconate to Vitamin B12. (PMID: 29056341) Shen H ... Mootha VK Cell 2017 3 4 54 CLYBL is a polymorphic human enzyme with malate synthase and β-methylmalate synthase activity. (PMID: 24334609) Strittmatter L ... Mootha VK Human molecular genetics 2014 3 4 54 Genome-wide association study identifies novel loci associated with serum level of vitamin B12 in Chinese men. (PMID: 22367966) Lin X ... Sun J Human molecular genetics 2012 3 41 54 Investigation of genetic susceptibility factors for human longevity - a targeted nonsynonymous SNP study. (PMID: 20800603) Flachsbart F ... Nebel A Mutation research 2010 3 41 54 Genetic variants in nuclear-encoded mitochondrial genes influence AIDS progression. (PMID: 20877624) Hendrickson SL ... O'Brien SJ PloS one 2010

CNKSR3: Jin L, Wang T, Jiang S, et al. The Association of a Genetic Variant in SCAF8-CNKSR3 with Diabetic Kidney Disease and Diabetic Retinopathy in a Chinese Population. Journal of Diabetes Research. 2017;2017:6542689. doi:10.1155/2017/6542689.

CNNM1: Inmaculada Gómez-García, Marchel Stuiver, June Ereño, Iker Oyenarte, María Angeles Corral-Rodríguez, Dominik Müller, Luis Alfonso Martínez-CruzActa Crystallogr Sect F Struct Biol Cryst Commun. 2012 Oct 1; 68(Pt 10): 1198–1203. Published online 2012 Sep 26. doi: 10.1107/S1744309112035348PMCID: PMC3497979Kei Hang K Chan, Sara A Chacko, Yiqing Song, Michele Cho, Charles B Eaton, Wen-Chih H Wu, Simin LiuJ Nutr. 2015 Mar; 145(3): 418–424. Published online 2015 Jan 7. doi: 10.3945/jn.114.203489PM

CNNM2: CNNM2 mutations cause impaired brain development and seizures in patients with hypomagnesemia. (PMID: 24699222) Arjona FJ . Hoenderop JG PLoS genetics 2014 2 3 4 56 Large-scale association analysis identifies 13 new susceptibility loci for coronary artery disease. (PMID: 21378990) Schunkert H . Samani NJ Nature genetics 2011 3 43 56 A genome-wide association study in Europeans and South Asians identifies five new loci for coronary artery disease. (PMID: 21378988) Coronary Artery Disease (C4



CNTNAP2: Zhuoyang Lu, M. V. V. V. Sekhar Reddy, Jianfang Liu, Ana Kalichava, Jiankang Liu, Lei Zhang, Fang Chen, Yun Wang, Luis Marcelo F. Holthauzen, Mark A. White, Suchithra Seshadrinathan, Xiaoying Zhong, Gang Ren, Gabby Rudenkoj Biol Chem. 2016 Nov 11; 291(46): 24133–24147. Published online 2016 Sep 12. doi: 10.1074/jbc.M116.748236 PMID: PMC5104938 Ruoqi Gao, Nicolas H. Piguel, Alexandria E. Melendez-Zaidi, Maria Dolores Martin-de-Saavedra, Sehyoun Yoon, Marc P. Forrest, Kristoffer Myczek.

COL4A1: Debbie S. Kuo, Cassandre Labelle-Dumais, Mao Mao, Marion Jeanne, William B. Kauffman, Jennifer Allen, Jack Favor, Douglas B. GouldHum Mol Genet. 2014 Apr 1; 23(7): 1709–1722. Published online 2013 Nov 7. doi: 10.1093/hmg/ddt560 PMID: PMC3943517 Frances E. Jones, Matthew A. Bailey, Lydia S. Murray, Yinhui Lu, Sarah McNeilly, Ursula Schlötzer-Schrehardt, Rachel Lennon, Yoshikazu Sado, David G. Brownstein, John J. Mullins, Karl E. Kadler, Tom Van AgtmaelDis Model Mech. 2016 Feb 1; 9(2): 165–1

COL6A4P1: Bravatà V, Minafra L, Forte GI, et al. DVWA gene polymorphisms and osteoarthritis. BMC Research Notes. 2015;8:30. doi:10.1186/s13104-015-0987-1.

COL8A1: Corominas J, Colijn JM, Geerlings MJ, et al. Whole-Exome Sequencing in Age-Related Macular Degeneration Identifies Rare Variants in COL8A1, a Component of Bruch's Membrane. Ophthalmology. 2018;125(9):1433-1443. doi:10.1016/j.ophtha.2018.03.040.

COLEC12: Lin-Li Chang, Wen-Hung Hsu, Mou-Chieh Kao, Chih-Chung Chou, Chung-Cheng Lin, Chung-Jung Liu, Bi-Chuang Weng, Fu-Chen Kuo, Chao-Hung Kuo, Ming-Hong Lin, Chun-Jen Wang, Chun-Hung Lin, Deng-Chyang Wu, Shau-Ku HuangSci Rep. 2018; 8: 3821. Published online 2018 Feb 28. doi: 10.1038/s41598-018-20957-2PMCID: PMC5830506 Eugene Lin, Po-Hsiu Kuo, Yu-Li Liu, Albert C. Yang, Shih-Jen Tsai Oncotarget. 2017 Nov 7; 8(55): 93349–93359. Published online 2017 Sep 16. doi: 10.18632/oncotarget.

COMT: Is there an association of genetic polymorphisms of the catechol-O-methyltransferase gene (rs165656 and rs174675) and the 5-hydroxytryptamine receptor 2A gene (rs4941573 and rs6313) with sleep bruxism in individuals with obstructive sleep apnea? (PMID: 34808513) Duarte J ... De Luca Canto G Archives of oral biology 2022 3 COMTVal158Met polymorphism is associated with ecstasy (MDMA)-induced psychotic symptoms in the Turkish population. (PMID: 35017287) Aytac HM ... Pehlivan S Neurosciences (Riyadh, Saudi Arabia) 2022 Warriors versus worriers: the role of COMT gene variants. Stein DJ1, Newman TK, Savitz J, Ramesar R. COMT genotype increases risk for bipolar I disorder and influences neurocognitive performance. Burdick KE1, Funke B, Goldberg JF, Bates JA, Jaeger J, Kucherlapati R, Malhotra AK. Genetic variants in COMT and neurocognitive impairment in families of patients with schizophrenia. Liao SY1, Lin SH, Liu CM, Hsieh MH, Hwang TJ, Liu SK, Guo SC, Hwu HG, Chen WJ. SARS-CoV-2-host proteome interactions for antiviral drug discovery. (PMID: 34709727) Liu X ... Varjosalo M Molecular systems biology 2021 3 Multilevel proteomics reveals host perturbations by SARS-CoV-2 and SARS-CoV. (PMID: 33845483) Stukalov A ... Pichlmair A Nature 2021 3 Dual proteome-scale networks reveal cell-specific remodeling of the human interactome. (PMID: 33961781) Huttlin EL ... Gygi SP Cell 2021 3 USP11 mediates repair of DNA-protein cross-links by deubiquitinating SPRTN metalloprotease. (PMID: 33567341) Perry M ... Ghosal G The Journal of biological chemistry 2021 3 BPA modulates the WDR5/TET2 complex to regulate ERβ expression in eutopic endometrium and drives the development of endometriosis. (PMID: 33022573) Xue W ... Yuanzhen Z Environmental pollution (Barking, Essex : 1987) 2021 3 Epistatic effect of Ankyrin repeat and kinase domain containing 1 - Dopamine receptor D2 and catechol-o-methyltransferase single nucleotide polymorphisms on the risk for hazardous use of alcohol in Lithuanian population. (PMID: 32889058) Kaminskaite M ... Bunevicius A Gene 2021 3 Effects of traumatic life events, cognitive biases and variation in dopaminergic genes on psychosis proneness. (PMID: 31889426) Kotowicz K ... Misiak B Early intervention in psychiatry 2021 3 Catechol-O-methyltransferase and dopamine receptor D4 gene variants: Possible association with substance abuse in Bangladeshi male. (PMID: 33544778) Sonia JA ... Kabir Y PloS one 2021 3 No links between genetic variation and developing theory of mind: A preregistered replication attempt of candidate gene studies. (PMID: 33666309) Opitz T ... Sodian B Developmental science 2021 3 Brain predictive coding processes are associated to COMT gene Val158Met polymorphism. (PMID: 33716157) Bonetti L ... Brattico E NeuroImage 2021 3 Genome-wide association study identifies RNF123 locus as associated with chronic widespread musculoskeletal pain. (PMID: 33926923) Rahman MS ... Williams FM Annals of the rheumatic diseases 2021 3 Association of COMT, BDNF and 5-HTT functional polymorphisms with personality characteristics. (PMID: 34856753) Tommasi M ... Gatta V Frontiers in bioscience (Landmark edition) 2021 3 Suppressor effect of catechol-O-methyltransferase gene in prostate cancer. (PMID: 34587154) Hashimoto Y ... Tanaka Y PloS one 2021 3 Risks of Macrosomia Associated with Catechol-O-Methyltransferase Genotypes and Genetic-Epigenetic Interactions among Children with and without Gestational Diabetes Exposure. (PMID: 33826421) Aguayo L ... Hou L Childhood obesity (Print) 2021 3 Impact of COMT val158met on tDCS-induced cognitive enhancement in older adults. (PMID: 33359367) Hayek D ... Flöel A Behavioural brain research 2021 3 COMT rs4818, pain



sensitivity and duration, and alveolar bone grafting of oral clefts. (PMID: 32989615) Silva EMVM ... Vieira AR Oral and maxillofacial surgery 2021 3 COMT Genotype and Efficacy of Propranolol for TMD Pain: A Randomized Trial. (PMID: 33030089) Slade GD ... Tchivileva IE Journal of dental research 2021 3 Polymorphisms in COMT, ADRB2 and HTR1A genes are associated with temporomandibular disorders in individuals with other arthralgias. (PMID: 31264537) Bonato LL ... Casado PL Cranio : the journal of craniomandibular practice 2021 3 The Associations between COMT and MAO-B Genetic Variants with Negative Symptoms in Patients with Schizophrenia. (PMID: 34287249) Madzarac Z ... Pivac N Current issues in molecular biology 2021 3 Mutations and structural variations in Catechol-O-methyltransferase gene of patients exhibiting chronic persistent surgical pain. (PMID: 33478750) Dharaniprasad G ... Bhan V Revista espanola de anestesiologia y reanimacion 2021 3 Catechol-O-methyltransferase (COMT) polymorphism predicts rapid gait speed changes in healthy older adults. (PMID: 34231207) Sprague BN ... Rosano C Journal of the American Geriatrics Society 2021 3 Influence of Catechol-O-Methyltransferase Gene Polymorphism on the Correlation between Alexithymia and Hypervigilance to Pain. (PMID: 34948872) Ikarashi H ... Onishi H International journal of environmental research and public health 2021 3 Genetic polymorphisms for BDNF, COMT, and APOE do not affect gait or ankle motor control in chronic stroke: A preliminary cross-sectional study. (PMID: 32378476) Aljuhni R ... Madhavan S Topics in stroke rehabilitation 2021 3 Influence of COMT polymorphism in cognitive performance on dementia in community-dwelling elderly Mexican (SADEM study). (PMID: 33900525) Juárez-Cedillo T ... Vargas-Alarcón G Metabolic brain disease 2021 3 Enhancing dopamine tone modulates global and local cortical perfusion as a function of COMT val158met genotype. (PMID: 34390874) Furman DJ ... D'Esposito M NeuroImage 2021 3 Fear of pain moderates the relationship between self-reported fatigue and methionine allele of catechol-O-methyltransferase gene in patients with fibromyalgia. (PMID: 33909692) Ferrera D ... Gómez-Esquer F PloS one 2021 3 Association of COMT Polymorphisms with Multiple Physical Activity-Related Injuries among University Students in China. (PMID: 34682575) Chen S ... Li L International journal of environmental research and public health 2021 3 Association Between the COMT Val158Met Polymorphism and Antipsychotic Efficacy in Schizophrenia: An Updated Meta-Analysis. (PMID: 33100205) Ma J ... Qin S Current neuropharmacology 2021 3 The roles of borderline personality disorder symptoms and dispositional capability for suicide in suicidal ideation and suicide attempts: Examination of the COMT Val158Met polymorphism. (PMID: 34051678) Tull MT ... Gratz KL Psychiatry research 2021 3 Catechol-O-Methyltransferase Genotype, Frailty, and Gait Speed in a Biracial Cohort of Older Adults. (PMID: 33043988) Mance S ... Rosano C Journal of the American Geriatrics Society 2021 3 Aberrant Brain Signal Variability and COMT Genotype in Chronic TMD Patients. (PMID: 33622085) Lim M ... DaSilva AF Journal of dental research 2021 3 Association between polymorphisms in catechol-O-methyl transferase, opioid receptor Mu 1 and serotonin receptor genes with postoperative pain following root canal treatment. (PMID: 33559241) Karataş E ... Akbıyık N International endodontic journal 2021 3 The association between selected genetic variants and individual differences in experimental pain. (PMID: 33108341) Lie MU ... Nilsen KB Scandinavian journal of pain 2021 3 Sex moderates the association between the COMT Val158Met single-nucleotide polymorphism and disorderliness facet of novelty seeking. (PMID: 33352204) Scacchia P ... De Pascalis V Neuroscience research 2021 3 Computational analysis of deleterious single nucleotide polymorphisms in catechol O-Methyltransferase conferring risk to post-traumatic stress disorder. (PMID: 33865170) Chitralla KN ... Nagarkatti M Journal of psychiatric research 2021 3 The interactive effect of genetic polymorphisms of IL-10 and COMT on cognitive function in schizophrenia. (PMID: 33127070) Wang J ... Zhang X Journal of psychiatric research 2021 3 Inhibitory Control Mediates the Associations Between Parenting Practices and Depressive Symptoms in Adolescents: The Moderating Role of Catechol-O-Methyltransferase (COMT) Gene. (PMID: 34259955) Cao Y ... Zhang W Journal of youth and adolescence 2021 3 Investigating interactive effects of worry and the catechol-o-methyltransferase gene (COMT) on working memory performance. (PMID: 34173216) Louis CC ... Moser JS Cognitive, affective & behavioral neuroscience 2021 3 Do oral contraceptives affect young women's memory? Dopamine-dependent working memory is influenced by COMT genotype, but not time of pill ingestion. (PMID: 34111174) Gravelsins L ... Einstein G PloS one 2021 3 SLC6A3 (DAT1) as a Novel Candidate Biomarker Gene for Suicidal Behavior. (PMID: 34199792) Rafikova E ... Vasilyev V Genes 2021 3 The COMT gene rs4680 polymorphism moderates the relationship between adult ADHD symptoms and executive dysfunction. (PMID: 33450700) Liu J ... Gong J Asian journal of psychiatry 2021 3 Influence of ADRB1, ADRB2, and COMT Genetic Polymorphisms on Postoperative Outcomes of Patients Undergoing Cardiac Valve Surgery. (PMID: 33451866) Dai S ... Wang E Clinical therapeutics 2021 3 The Effects of Childhood Maltreatment on Non-Suicidal Self-Injury in Male Adolescents: The Moderating Roles of the Monoamine Oxidase A (MAOA) Gene and the Catechol-O-Methyltransferase (COMT) Gene. (PMID: 33807669) Gao Y ... Wang H International journal of environmental research and public health 2021 3 Association study of Catechol-o-methyltransferase and Alpha-1-adrenergic receptor gene polymorphisms with multiple phenotypes of heroin use disorder. (PMID: 33577997) Deji C ... Wei S Neuroscience letters 2021 Comparative host-coronavirus protein interaction networks reveal pan-viral disease mechanisms. (PMID: 33060197) Gordon DE ... Krogan NJ Science (New York, N.Y.) 2020 3 RIG-I regulates myeloid differentiation by promoting TRIM25-mediated ISGylation. (PMID: 32513696) Wu SF

Name Sample

Age

Gender

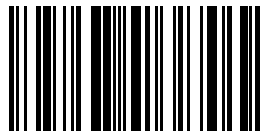
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Health insurance



Sample

... Chen S Proceedings of the National Academy of Sciences of the United States of America 2020 3 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA Nature 2020 3 Interactome Mapping Provides a Network of Neurodegenerative Disease Proteins and Uncovers Widespread Protein Aggregation in Affected Brains. (PMID: 32814053) Haenig C ... Wanker EE Cell reports 2020 3 Extensive rewiring of the EGFR network in colorectal cancer cells expressing transforming levels of KRASG13D. (PMID: 31980649) Kennedy SA ... Kolch W Nature communications 2020 3 A SARS-CoV-2 protein interaction map reveals targets for drug repurposing. (PMID: 32353859) Gordon DE ... Krogan NJ Nature 2020 3 Synthetic Lethal and Resistance Interactions with BET Bromodomain Inhibitors in Triple-Negative Breast Cancer. (PMID: 32416067) Shu S ... Polyak K Molecular cell 2020 3 The influence of dopaminergic polymorphisms on selective stopping. (PMID: 31863847) Rincón-Pérez I ... Albert J Behavioural brain research 2020 3 The effect of rs1076560 (DRD2) and rs4680 (COMT) on tardive dyskinesia and cognition in schizophrenia subjects. (PMID: 32931693) Puchaichira TJ ... Thelma BK Psychiatric genetics 2020 3 Genetic susceptibility to parenting style: DRD2 and COMT influence creativity. (PMID: 32119983) Si S ... Zhang J NeuroImage 2020 3 Genetic Biomarkers of Panic Disorder: A Systematic Review. (PMID: 33158196) Tretiakov A ... Klimov E Genes 2020 3 Association of COMT Gene Polymorphisms with Response to Methadone Maintenance Treatment Among Chinese Opioid-Dependent Patients. (PMID: 32407152) Duan L ... Li X Genetic testing and molecular biomarkers 2020 3 COMT val158met genotype alters the effects of methamphetamine dependence on dopamine and dopamine-related executive function: preliminary findings. (PMID: 32739643) Saloner R ... Ellis RJ Psychiatry research 2020 3 Interaction between catechol-O-methyltransferase polymorphism and childhood trauma in suicidal ideation of patients with post-traumatic stress disorder. (PMID: 32618128) Kwon A ... Lee SH Brain and behavior 2020 3 Association between categorization of emotionally-charged and neutral visual scenes and parameters of event-related potentials in carriers of different COMT, HTR2A, BDNF gene genotypes. (PMID: 32983417) Vorobyeva EV ... Stoletniy AS F1000Research 2020 3 Effects of childhood trauma experience and COMT Val158Met polymorphism on brain connectivity in a multimodal MRI study. (PMID: 32997444) Tian T ... Zhu W Brain and behavior 2020 3 Evaluation of COMT (rs4680), CNR2 (rs2501432), CNR2 (rs2229579), UCP2 (rs659366), and IL-17 (rs763780) gene variants in synthetic cannabinoid use disorder patients. (PMID: 32662357) Pehlivan S ... Cetinay Aydin P Journal of addictive diseases 2020 3 The role of COMT polymorphism in modulation of prefrontal activity during verbal fluency in bipolar disorder. (PMID: 32822765) Devrimci-Ozguven H ... Baskak B Neuroscience letters 2020

COQ2: Jun-yi Zhu, Yulong Fu, Adam Richman, Zhanzheng Zhao, Patricio E. Ray, Zhe HanJ Am Soc Nephrol. 2017 Sep; 28(9): 2607–2617. Published online 2017 Apr 20. doi: 10.1681/ASN.2016060626PMCID: PMC5576924Diran Herebian, Annette Seibt, Sander H. J. Smits, Richard J. Rodenburg, Ertan Mayatepek, Felix DistelmaierAnn Clin Transl Neurol. 2017 Dec; 4(12): 902–908. Published online 2017 Oct 17. doi: 10.1002/acn3.486PMCID: PMC5740244Kotaro Ogaki, Shinsuke Fujioka, Michael G Heckman, Sruti Rayaprolu, Alexa

COQ4: He CH, Xie LX, Allan CM, Tran UC, Clarke CF. Coenzyme Q supplementation or over-expression of the yeast Coq8 putative kinase stabilizes multi-subunit Coq polypeptide complexes in yeast coq null mutants. Biochimica et biophysica acta. 2014;1841(4):630-644. doi:10.1016/j.bbailip.2013.12.017.

COQ6: Ozeir M, Pelosi L, Ismail A, Mellot-Draznieks C, Fontecave M, Pierrel F. Coq6 Is Responsible for the C4-deamination Reaction in Coenzyme Q Biosynthesis in Saccharomyces cerevisiae. The Journal of Biological Chemistry. 2015;290(40):24140-24151. doi:10.1074/jbc.M115.675744.

COQ7: Wang Y, Smith C, Parboosingh JS, Khan A, Innes M, Hekimi S. Pathogenicity of two COQ7 mutations and responses to 2,4-dihydroxybenzoate bypass treatment. Journal of Cellular and Molecular Medicine. 2017;21(10):2329-2343. doi:10.1111/jcmm.13154.

COQ8A: Stefely JA, Licitra F, Laredj L, et al. Cerebellar Ataxia and Coenzyme Q Deficiency Through Loss of Unorthodox Kinase Activity. Molecular cell. 2016;63(4):608-620. doi:10.1016/j.molcel.2016.06.030.

COQ9: Luna-Sánchez M, Díaz-Casado E, Barca E, et al. The clinical heterogeneity of coenzyme Q10 deficiency results from genotypic differences in the Coq9 gene. EMBO Molecular Medicine. 2015;7(5):670-687. doi:10.15252/emmm.201404632.

CPS1: The T1405N carbamoyl phosphate synthetase polymorphism does not affect plasma arginine concentrations in preterm infants. (PMID: 20520828) Moonen RM . Villamor E PloS one 2010 3 4 23 45 58 Structural insight on the control of urea synthesis: identification of the binding site for N-acetyl-L-glutamate, the essential allosteric activator of mitochondrial carbamoyl phosphate synthetase. (PMID: 19754428) Pekkala S . Cervera J The Biochemical journal 2009 3 4 23 58 Genetic variation in the mitoc

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



CR1: Fonseca MI, Chu S, Pierce AL, et al. Analysis of the Putative Role of CR1 in Alzheimer’s Disease: Genetic Association, Expression and Function. Zabel MD, ed. PLoS ONE. 2016;11(2):e0149792. doi:10.1371/journal.pone.0149792.

CR1L: Complement receptor 1 gene variants are associated with erythrocyte sedimentation rate. (PMID: 21700265) Kullo IJ . Chute CG American journal of human genetics 2011 3 45 58 Genome-wide association analysis of metabolic traits in a birth cohort from a founder population. (PMID: 19060910) Sabatti C . Peltonen L Nature genetics 2009 3 45 58 A human CR1-like transcript containing sequence for a binding protein for iC4 is expressed in hematopoietic and fetal lymphoid tissue. (PMID: 14687939) Log

CRHR1: Julia Bender, Maik Engeholm, Marion S. Ederer, Johannes Breu, Thor C. Møller, Stylianos Michalakis, Tamas Rasko, Erich E. Wanker, Martin Biel, Karen L. Martinez, Wolfgang Wurst, Jan M. DeussingPloS One. 2015; 10(9): e0136768. Published online 2015 Sep 9. doi: 10.1371/journal.pone.0136768PMCID: PMC4564177Androniki Raftogianni, Lena C. Roth, Diego García-González, Thorsten Bus, Claudia Kühne, Hannah Monyer, Daniel J. Spergel, Jan M. Deussing, Valery GrinevichFront Mol Neurosci. 2018; 11: 305.

CRP: Sudhakar M, Silambanan S, Chandran AS, Prabhakaran AA, Ramakrishnan R. C-Reactive Protein (CRP) and Leptin Receptor in Obesity: Binding of Monomeric CRP to Leptin Receptor. Frontiers in Immunology. 2018;9:1167. doi:10.3389/fimmu.2018.01167.

CRTC1: Rossetti C, Sciarra D, Petit J-M, et al. Gender-specific alteration of energy balance and circadian locomotor activity in the Crtc1 knockout mouse model of depression. Translational Psychiatry. 2017;7(12):1269. doi:10.1038/s41398-017-0023-4.

CRYBB2: A Novel CRYBB2 Stopgain Mutation Causing Congenital Autosomal Dominant Cataract in a Chinese Family Yu Zhou,1,2,3 Yaru Zhai,1 Lulin Huang,1,2,3 Bo Gong,1,2,3 Jie Li,4 Fang Hao,1,2,3 Zhengzheng Wu,4 Yi Shi,1,2,3 and Yin Yang1,3,4

CRYBB3: A Common Ancestral Mutation in CRYBB3 Identified in Multiple Consanguineous Families with Congenital Cataracts. Jiao X1, Kabir F2, Irum B2,3, Khan AO4, Wang Q1, Li D1, Khan AA3, Husnain T3, Akram J5,6, Riazuddin S3,5,6, Hejtmancik JF1, Riazuddin SA2. Different evolution rates within the lens-specific beta-crystallin gene family. Aarts HJ1, Jacobs EH, van Willigen G, Lubsen NH, Schoenmakers JG.

CRYGD: Novel mutations in CRYGD are associated with congenital cataracts in Chinese families Guoxing Yang, Zhimin Chen, Wulin Zhang, Zhiqiang Liu & Jialiang Zhao

CSMD1: Escudero-Esparza A, Bartoschek M, Gialeli C, et al. Complement inhibitor CSMD1 acts as tumor suppressor in human breast cancer. Oncotarget. 2016;7(47):76920-76933. doi:10.18632/oncotarget.12729.

CSTA: Ma Y, Chen Y, Li Y, et al. Cystatin A suppresses tumor cell growth through inhibiting epithelial to mesenchymal transition in human lung cancer. Oncotarget. 2018;9(18):14084-14098. doi:10.18632/oncotarget.23505.

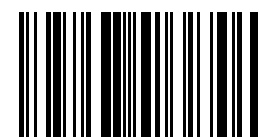
CTC1: Wang Y, Chai W. Pathogenic CTC1 mutations cause global genome instabilities under replication stress. Nucleic Acids Research. 2018;46(8):3981-3992. doi:10.1093/nar/gky114.

CTLA4: Mackroth MS, Abel A, Steeg C, Schulze zur Wiesch J, Jacobs T. Acute Malaria Induces PD1+CTLA4+ Effector T Cells with Cell-Extrinsic Suppressor Function. Engwerda CR, ed. PLoS Pathogens. 2016;12(11):e1005909. doi:10.1371/journal.ppat.1005909.

CTNNA3: Bing He, Ting Li, Lei Guan, Fang-E Liu, Xue-Mei Chen, Jing Zhao, Song Lin, Zhi-Zhen Liu, Hu-Qin ZhangOncotarget. 2016 Feb 16; 7(7): 8078–8089. Published online 2016 Jan 22. doi: 10.18632/oncotarget.6978PMCID: PMC4884977Elena Bacchelli, Fabiola Ceroni, Dalila Pinto, Silvia Lomartire, Maila Giannandrea, Patrizia D'Adamo, Elena Bonora, Piero Parchi, Raffaella Tancredi, Agatino Battaglia, Elena MaestriniJ Neurodev Disord. 2014; 6(1): 17. Published online 2014 Jul 10. doi: 10.1186/1866-1955-6-17

CTNNB1: Van Maldegem F, Maslen S, Johnson CM, et al. CTNNB1 facilitates the association of CWC15 with CDC5L and is required to maintain the abundance of the Prp19 spliceosomal complex. Nucleic Acids Research. 2015;43(14):7058-7069. doi:10.1093/nar/gkv643.





CUBN: Olivier Cases, Aitana Perea-Gomez, Diego P. Aguiar, Anders Nykjaer, Sabine Amsellem, Jacqueline Chandellier, Muriel Umbhauer, Silvia Cereghini, Mette Madsen, Jérôme Collignon, Pierre Verroust, Jean-François Riou, Sophie E. Creuzet, Renata Kozyrakij Biol Chem. 2013 Jun 7; 288(23): 16655–16670. Published online 2013 Apr 16. doi: 10.1074/jbc.M113.451070 PMID: PMC3675600 John C. Fyfe, Shelby L. Hemker, Alycia Frampton, Karthik Raj, Peter L. Nagy, Kristi J. Gibbon, Urs GigerBMC Vet Res. 2018.

CX3CR1: Wang J, Gan Y, Han P, et al. Ischemia-induced Neuronal Cell Death Is Mediated by Chemokine Receptor CX3CR1. Scientific Reports. 2018;8:556. doi:10.1038/s41598-017-18774-0.

CYP11B2: Suzuki D, Saito-Hakoda A, Ito R, et al. Suppressive effects of RXR agonist PA024 on adrenal CYP11B2 expression, aldosterone secretion and blood pressure. Ariga H, ed. PLoS ONE. 2017;12(8):e0181055. doi:10.1371/journal.pone.0181055.

CYP17A1: Petrunak EM, Rogers SA, Aubé J, Scott EE. Structural and Functional Evaluation of Clinically Relevant Inhibitors of Steroidogenic Cytochrome P450 17A1. Drug Metabolism and Disposition. 2017;45(6):635-645. doi:10.1124/dmd.117.075317.

CYP19A1: Chen Z, Wang O, Nie M, et al. Aromatase deficiency in a Chinese adult man caused by novel compound heterozygous CYP19A1 mutations: Effects of estrogen replacement therapy on the bone, lipid, liver and glucose metabolism. Molecular and cellular endocrinolo

CYP1A1: Peddireddy V, Badabagni SP, Gundimeda SD, Mamidipudi V, Penagaluru PR, Mundluru HP. Association of CYP1A1, GSTM1 and GSTT1 gene polymorphisms with risk of non-small cell lung cancer in Andhra Pradesh region of South India. European Journal of Medical Rese

CYP1A2: Chen Y, Zeng L, Wang Y, et al. The expression, induction and pharmacological activity of CYP1A2 are post-transcriptionally regulated by microRNA hsa-miR-132-5p. Biochemical pharmacology. 2017;145:178-191. doi:10.1016/j.bcp.2017.08.012.

CYP1B1: Banerjee A, Chakraborty S, Chakraborty A, Chakrabarti S, Ray K. Functional and Structural Analyses of CYP1B1 Variants Linked to Congenital and Adult-Onset Glaucoma to Investigate the Molecular Basis of These Diseases. Anderson MG, ed. PLoS ONE. 2016;11(5)

CYP24A1: Julia Höbaus, Samawansha Tennakoon, Petra Heffeter, Charlotte Groeschel, Abhishek Aggarwal, Doris M. Hummel, Ursula Thiem, Rodrig Marculescu, Walter Berger, Enikő KállayInt J Cancer. 2016 Jan 15; 138(2): 440–450. Published online 2015 Aug 17. doi: 10.1002/ijc.29717 PMID: PMC4832261 Peter J. Tebben, Ravinder J. Singh, Rajiv KumarEndocr Rev. 2016 Oct; 37(5): 521–547. Published online 2016 Sep 2. doi: 10.1210/er.2016-1070 PMID: PMC5045493 Elaine W. Tieu, Wei Li, Jianjun Chen, Tae-Kang Kim.

CYP27B1: Meyer MB, Benkusky NA, Kaufmann M, et al. A kidney-specific genetic control module in mice governs endocrine regulation of the cytochrome P450 gene Cyp27b1 essential for vitamin D3 activation. The Journal of Biological Chemistry. 2017;292(42):17541-17558.

CYP2C9: Upstream and coding region CYP2C9 polymorphisms: correlation with warfarin dose and metabolism. King BP1, Khan TI, Aithal GP, Kamali F, Daly AK. Interaction of CYP2C8 and CYP2C9 genotypes modifies the risk for nonsteroidal anti-inflammatory drugs-related acute gastrointestinal bleeding. Blanco G1, Martínez C, Ladero JM, Garcia-Martin E, Taxonera C, Gamito FG, Diaz-Rubio M, Agundez JA. Use of pharmacogenetic and clinical factors to predict the therapeutic dose of warfarin. Gage BF1, Eby C, J

CYP2E1: W. A. García-Suástegui, L. A. Ramos-Chávez, M. Rubio-Osornio, M. Calvillo-Velasco, J. A. Atzin-Méndez, J. Guevara, D. Silva-Adaya Oxid Med Cell Longev. 2017; 2017: 4680732. Published online 2017 Jan 10. doi: 10.1155/2017/4680732 PMID: PMC5259652 Cesar Kenaan, Erin V. Shea, Hsia-lien Lin, Haoming Zhang, Matthew J. Pratt-Hyatt, Paul F. Hollenberg Drug Metab Dispos. 2013 Jan; 41(1): 101–110. Published online 2013 Jan. doi: 10.1124/dmd.112.046094PMCID: PMC3533429 Hongming Liu, Guiyu Lou, Chong

CYP2R1: Thanapirom K, Suksawatamnuay S, Sukeepaisarnjareon W, et al. Genetic variation in the vitamin D pathway CYP2R1 gene predicts sustained HBeAg seroconversion in chronic hepatitis B patients treated with pegylated interferon: A multicenter study. Huang J-F,

Name Sample

Age

Gender

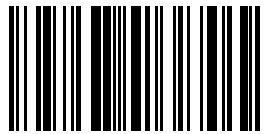
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

- CYP3A4:** Liu J-E, Ren B, Tang L, et al. The independent contribution of miRNAs to the missing heritability in CYP3A4/5 functionality and the metabolism of atorvastatin. *Scientific Reports*. 2016;6:26544. doi:10.1038/srep26544.
- CYP3A5:** Yoshiyuki Shirasaka, Shu-Ying Chang, Mary F. Grubb, Chi-Chi Peng, Kenneth E. Thummel, Nina Isoherranen, A. David RodriguesDrug Metab Dispos. 2013 Aug; 41(8): 1566–1574. Published online 2013 Aug. doi: 10.1124/dmd.112.049940PMCID: PMC3716306Carrie A. Vyhlidal, Robin E. Pearce, Roger Gaedigk, Justina C. Calamia, Diana L. Shuster, Kenneth E. Thummel, J. Steven LeederDrug Metab Dispos. 2015 Aug; 43(8): 1286–1293. Published online 2015 Aug. doi: 10.1124/dmd.115.064998Correction in: Drug Metab Di
- CYP4A11:** Sirotina S, Ponomarenko I, Kharchenko A, et al. A Novel Polymorphism in the Promoter of the CYP4A11 Gene Is Associated with Susceptibility to Coronary Artery Disease. *Disease Markers*. 2018;2018:5812802. doi:10.1155/2018/5812802.
- CYP4F2:** CYP4F2 is a vitamin K1 oxidase: An explanation for altered warfarin dose in carriers of the V433M variant. (PMID: 19297519) McDonald MG ... Rettie AE *Molecular pharmacology* 2009 3 4 21 39 CYP4F2 gene V433M polymorphism is associated with ischemic stroke in the male Northern Chinese Han population. (PMID: 20227456) Deng S ... Zhiyi H *Progress in neuro-psychopharmacology & biological psychiatry* 2010 3 21 39 Pharmacogenetic relevance of CYP4F2 V433M polymorphism on acenocoumarol therapy. (PMID: 19270263) Pérez-Andreu V ... González-Conejero R *Blood* 2009 3 4 39 CYP4F2 genetic variant (rs2108622) significantly contributes to warfarin dosing variability in the Italian population. (PMID: 19207028) Borgiani P ... Novelli G *Pharmacogenomics* 2009 3 4 39 A genome-wide association study of acenocoumarol maintenance dosage. (PMID: 19578179) Teichert M ... Stricker BH *Human molecular genetics* 2009
- CYP51A1:** Režen T, Ogris I, Sever M, Merzel F, Golic Grdadolnik S, Rozman D. Evaluation of Selected CYP51A1 Polymorphisms in View of Interactions with Substrate and Redox Partner. *Frontiers in Pharmacology*. 2017;8:417. doi:10.3389/fphar.2017.00417.
- DAB2IP:** Bellazzo A, Di Minin G, Collavin L. Block one, unleash a hundred. Mechanisms of DAB2IP inactivation in cancer. *Cell Death and Differentiation*. 2017;24(1):15-25. doi:10.1038/cdd.2016.134.
- DAPK1:** Dayton J. Goodell, Vincent Zaegel, Steven J. Coultrap, Johannes W. Hell, K. Ulrich BayerCell Rep. Author manuscript; available in PMC 2017 Aug 9.Published in final edited form as: Cell Rep. 2017 Jun 13; 19(11): 2231–2243. doi: 10.1016/j.celrep.2017.05.068PMCID: PMC5549467Lei Pei, Shan Wang, Huijuan Jin, Linlin Bi, Na Wei, Honglin Yan, Xin Yang, Chengye Yao, Mengmeng Xu, Shu Shu, Yu Guo, Huanhuan Yan, Jianhua Wu, Hao Li, Pei Pang, Tian Tian, Qing Tian, Ling-Qiang Zhu, You Shang, Youming Lu.
- DAPL1:** Felix Grassmann, Ulrike Friedrich, Sascha Fauser, Tina Schick, Andrea Milenkovic, Heidi L. Schulz, Claudia N. von Strachwitz, Thomas Bettecken, Peter Lichtner, Thomas Meitinger, Nicole Arend, Armin Wolf, Christos Haritoglou, Guenther Rudolph, Usha Chakravarthy, Giuliana Silvestri, Gareth J. McKay, Sandra Freitag-Wolf, Michael Krawczak, R. Theodore Smith, John C. Merriam, Joanna E. Merriam, Rando Allikmets, Iris M. Heid, Bernhard H. F. Weber *Neuromolecular Med*. 2015; 17(2): 111–120.
- DAT:** Sorkina T, Ma S, Larsen MB, Watkins SC, Sorkin A. Small molecule induced oligomerization, clustering and clathrin-independent endocytosis of the dopamine transporter. Gether U, ed. *eLife*. 2018;7:e32293. doi:10.7554/eLife.32293.
- DBC1:** Qin B, Minter-Dykhouse K, Yu J, et al. DBC1 Functions as a Tumor Suppressor by Regulating p53 Stability. *Cell reports*. 2015;10(8):1324-1334. doi:10.1016/j.celrep.2015.01.066.
- DBH:** Huang J, Ren T, Cao S, et al. HBx-related long non-coding RNA DBH-AS1 promotes cell proliferation and survival by activating MAPK signaling in hepatocellular carcinoma. *Oncotarget*. 2015;6(32):33791-33804.
- DCDC2:** Schueler M, Braun DA, Chandrasekar G, et al. DCDC2 Mutations Cause a Renal-Hepatic Ciliopathy by Disrupting Wnt Signaling. *American Journal of Human Genetics*. 2015;96(1):81-92. doi:10.1016/j.ajhg.2014.12.002.

Name	Sample		
Age	Gender	F	Report date
Prescriber		Health insurance	
12/09/2025			



DCDC5: Twenty bone-mineral-density loci identified by large-scale meta-analysis of genome-wide association studies. (PubMed id 19801982)1, 4 Rivadeneira F...Uitterlinden A.G. (Nat. Genet. 2009) The evolving doublecortin (DCX) superfamily. (PubMed id 16869982)1, 3 Reiner O.... Bergmann S. (BMC Genomics 2006) Human chromosome 11 DNA sequence and analysis including novel gene identification. (PubMed id 16554811)1, 2 Taylor T.D....Sakaki Y. (Nature 2006) Complete sequencing and characterization of 21,243 full-length human cDNAs. (PubMed id 14702039)1, 2 Ota T.... Sugano S. (Nat. Genet. 2004) Genome-wide meta-analysis identifies 56 bone mineral density loci and reveals 14 loci associated with risk of fracture. (PubMed id 22504420)1 Estrada K....Rivadeneira F. (Nat. Genet. 2012) Meta-analysis identifies multiple loci associated with kidney function-related traits in east Asian populations. (PubMed id 22797727)1 Okada Y....Tanaka T. (Nat. Genet. 2012) Linking cytoplasmic dynein and transport of Rab8 vesicles to the midbody during cytokinesis by the doublecortin domain-containing 5 protein. (PubMed id 22159412)1 Kaplan A. and Reiner O. (J. Cell. Sci. 2011) Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PubMed id 20379614)1 Rose J.E....Uhl G.R. (Mol. Med. 2010) The doublecortin gene family and disorders of neuronal structure. (PubMed id 20236041)1 Dijkmans T.F.... Vreugdenhil E. (Cent. Nerv. Syst. Agents Med. Chem. 2010) Genome-wide association studies of serum magnesium, potassium, and sodium concentrations identify six Loci influencing serum magnesium levels. (PubMed id 20700443)1 Meyer T.E.... . (PLoS Genet. 2010)

DCLK1: Dai T, Hu Y, Lv F, et al. Analysis of the clinical significance of DCLK1+colorectal cancer using novel monoclonal antibodies against DCLK1. OncoTargets and therapy. 2018;11:5047-5057. doi:10.2147/OTT.S169928.

DDC: Yi Z, Ouyang S, Zhou C, et al. Andrographolide Inhibits Mechanical and Thermal Hyperalgesia in a Rat Model of HIV-Induced Neuropathic Pain. Frontiers in Pharmacology. 2018;9:593. doi:10.3389/fphar.2018.00593.

DDX60L: Oliver Grünvogel, Katharina Esser-Nobis, Anna Reustle, Philipp Schult, Birthe Müller, Philippe Metz, Martin Trippler, Marc P. Windisch, Michael Frese, Marco Binder, Oliver Fackler, Ralf Bartenschlager, Alessia Ruggieri, Volker LohmannJ Virol. 2015 Oct 15; 89(20): 10548–10568. Published online 2015 Aug 12. doi: 10.1128/JVI.01297-15PMCID: PMC4580188 Rana Khsheibun, Tamar Paperna, Anat Volkowich, Izabella Lejbkowicz, Nili Avidan, Ariel MillerPLoS One. 2014; 9(7): e102331.

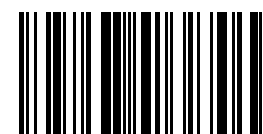
DEF8: PLEKHM1/DEF8/RAB7 complex regulates lysosome positioning and bone homeostasis. (PMID: 27777970) Fujiwara T . Zhao H JCI insight 2016 2 3 58 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T . Sugano S Nature genetics 2004 3 4 58 Architecture of the human interactome defines protein communities and disease networks. (PMID: 28514442) Huttlin EL . Harper JW Nature 2017 3 58 RNA-binding activity of TRIM25 is mediated by its PRY/SPRY domain and is

DGKH: Külpmann R, Christiansen B, Kramer A, et al. Hygiene guideline for the planning, installation, and operation of ventilation and air-conditioning systems in health-care settings – Guideline of the German Society for Hospital Hygiene (DGKH). GMS Hygiene and

DHFR: Identification and characterization of an inborn error of metabolism caused by dihydrofolate reductase deficiency. (PMID: 21310276) Banka S ... Newman WG American journal of human genetics 2011 3 4 70 Dihydrofolate reductase deficiency due to a homozygous DHFR mutation causes megaloblastic anemia and cerebral folate deficiency leading to severe neurologic disease. (PMID: 21310277) Cario H ... Schwarz K American journal of human genetics 2011 3 4 70 Correlations of inhibitor kinetics for Pneumocystis jirovecii and human dihydrofolate reductase with structural data for human active site mutant enzyme complexes. (PMID: 19196009) Cody V ... Rosowsky A Biochemistry 2009 3 4 21 Genetic association study of putative functional single nucleotide polymorphisms of genes in folate metabolism and spina bifida. (PMID: 19683694) Martinez CA ... Au KS American journal of obstetrics and gynecology 2009 3 21 39 A 19-base pair deletion polymorphism in dihydrofolate reductase is associated with increased unmetabolized folic acid in plasma and decreased red blood cell folate. (PMID: 19022952) Kalmbach RD ... Selhub J The Journal of nutrition 2008

DIO1: A common variation in deiodinase 1 gene DIO1 is associated with the relative levels of free thyroxine and triiodothyronine. (PMID: 18492748) Panicker V . Frayling TM The Journal of clinical endocrinology and metabolism 2008 3 23 45 58 The association of polymorphisms in the type 1 and 2 deiodinase genes with circulating thyroid hormone parameters and atrophy of the medial temporal lobe. (PMID: 17105838) de Jong FJ . Breteler MM The Journal of clinical endocrinology and metabolism 2007 3 23





DIO2: Park E, Jung J, Araki O, et al. Concurrent TSHR mutations and DIO2 T92A polymorphism result in abnormal thyroid hormone metabolism. *Scientific Reports*. 2018;8:10090. doi:10.1038/s41598-018-28480-0.

DIRC3: Shen Z, Ren W, Bai Y, et al. DIRC3 and near NABP1 genetic polymorphisms are associated laryngeal squamous cell carcinoma patient survival. *Oncotarget*. 2016;7(48):79596-79604. doi:10.18632/oncotarget.12865.

DKK1: Lucia D'Amico, Sahil Mahajan, Aude-Hélène Capietto, Zhengfeng Yang, Ali Zamani, Biancamaria Ricci, David B. Bumpass, Melissa Meyer, Xinming Su, Andrea Wang-Gillam, Katherine Weilbaecher, Sheila A. Stewart, David G. DeNardo, Roberta FaccioJ Exp Med. 2016 May 2; 213(5): 827–840. doi: 10.1084/jem.20150950PMCID: PMC4854727Phillip C. Witcher, Sara E. Miner, Daniel J. Horan, Whitney A. Bullock, Kyung-Eun Lim, Kyung Shin Kang, Alison L. Adaniya, Ryan D. Ross, Gabriela G. Loots, Alexander G. Roblin

DKKL1: Yan Q, Wu X, Chen C, et al. Developmental expression and function of DKKL1/Dkk1 in humans and mice. *Reproductive Biology and Endocrinology: RB&E*. 2012;10:51. doi:10.1186/1477-7827-10-51.

DLAT: Clinical and genetic spectrum of pyruvate dehydrogenase deficiency: dihydrolipoamide acetyltransferase (E2) deficiency. (PMID: 16049940) Head RA ... Brown GK *Annals of neurology* 2005 3 4 21 70 Organization of the cores of the mammalian pyruvate dehydrogenase complex formed by E2 and E2 plus the E3-binding protein and their capacities to bind the E1 and E3 components. (PMID: 14638692) Hiromasa Y ... Roche TE *The Journal of biological chemistry* 2004 3 4 21 Sirtuin 4 is a lipoamidase regulating pyruvate dehydrogenase complex activity. (PMID: 25525879) Mathias RA ... Cristea IM *Cell* 2014 3 4 Solution structure and characterisation of the human pyruvate dehydrogenase complex core assembly. (PMID: 20361979) Vijayakrishnan S ... Byron O *Journal of molecular biology* 2010 3 4 Catalytic domain of PDC-E2 contains epitopes recognized by antimitochondrial antibodies in primary biliary cirrhosis. (PMID: 20180236) Braun S ... Klein R *World journal of gastroenterology* 2010

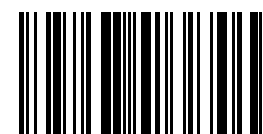
DLC1: Brajendra K. Tripathi, Tiera Grant, Xiaolan Qian, Ming Zhou, Philipp Mertins, Dunrui Wang, Alex G. Papageorge, Sergey G. Tarasov, Kent W. Hunter, Steven A. Carr, Douglas R. LowyJ *Cell Biol*. 2017 Dec 4; 216(12): 4255–4270. doi: 10.1083/jcb.201703105 PMCID: PMC5716279 Brajendra K. Tripathi, Xiaolan Qian, Philipp Mertins, Dunrui Wang, Alex G. Papageorge, Steven A. Carr, Douglas R. LowyJ *Cell Biol*. 2014 Dec 8; 207(5): 627–642. doi: 10.1083/jcb.201405105PMCID: PMC4259810 Choon Kiat Sim, Sun-Yee

DLEU1: Tianyou Liu, Zhiyang Han, Huanyu Li, Yuekun Zhu, Ziquan Sun, Anlong ZhuMol Cancer. 2018; 17: 118. Published online 2018 Aug 11. doi: 10.1186/s12943-018-0873-2PMCID: PMC6087004Chang Liu, Xing Tian, Jing Zhang, Lifeng JiangFront Genet. 2018; 9: 629. Published online 2018 Dec 7. doi: 10.3389/fgene.2018.00629PMCID: PMC6292861 Sanghoon Lee, Wen Luo, Tishi Shah, Changhong Yin, Timmy O'Connell, Tae-Hoon Chung, Sherrie L Perkins, Rodney R Miles, Janet Ayello, Erin Morris, Lauren Harrison.

DLG2: Claudio Reggiani, Sandra Coppens, Tayeb Sekhara, Ivan Dimov, Bruno Pichon, Nicolas Lufin, Marie-Claude Addor, Elga Fabia Belligni, Maria Cristina Digilio, Flavio Faletra, Giovanni Battista Ferrero, Marion Gerard, Bertrand Isidor, Shelagh Joss, Florence Niel-Bütschi, Maria Dolores Perrone, Florence Petit, Alessandra Renieri, Serge Romana, Alexandra Topa, Joris Robert Vermeesch, Tom Lenaerts, Georges Casimir, Marc Abramowicz, Gianluca Bontempi, Catheline Vilain, Nicolas Deconinck.

DMD: Ignazio Maggio, Luca Stefanucci, Josephine M. Janssen, Jin Liu, Xiaoyu Chen, Vincent Mouly, Manuel A.F.V. Gonçalves *Nucleic Acids Res*. 2016 Feb 18; 44(3): 1449–1470. Published online 2016 Jan 13. doi: 10.1093/nar/gkv1540 PMCID: PMC4756843 Ignazio Maggio, Jin Liu, Josephine M. Janssen, Xiaoyu Chen, Manuel A. F. V. Gonçalves *Sci Rep*. 2016; 6: 37051. Published online 2016 Nov 15. doi: 10.1038/srep37051 PMCID: PMC5109245 Frederique Ruf-Zamojski, Vikas Trivedi, Scott E. Fraser, Le A. TrinhPLOS O

DMGDH: Cloning of dimethylglycine dehydrogenase and a new human inborn error of metabolism, dimethylglycine dehydrogenase deficiency. (PMID: 11231903) Binzak BA ... VockleyJ *American journal of human genetics* 2001 2 3 4 23 54 Structure and analysis of the human dimethylglycine dehydrogenase gene. (PMID: 10767172) Binzak BA ... VockleyJ *Molecular genetics and metabolism* 2000 2 3 4 23 54 Defect in dimethylglycine dehydrogenase, a new inborn error of metabolism: NMR spectroscopy study. (PMID: 10102904) Moolenaar SH ... Wevers RA *Clinical chemistry* 1999 3 4 23 54 Structure and biochemical properties of recombinant human dimethylglycine dehydrogenase and comparison to the disease-related H109R variant. (PMID: 27486859) Augustin P ... Macheroux P *The FEBS journal* 2016 3 4 54 Variation at the NFATC2 locus increases the risk of thiazolidinedione-induced edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) study. (PMID: 20628086) Bailey SD ... DREAM investigators *Diabetes care* 2010



DMRT1: Valentine A. Agbor, Shixin Tao, Ning Lei, Leslie L. Heckert Biol Reprod. 2013 Feb; 88(2): 51. Published online 2012 Dec 19. doi: 10.1095/biolreprod.112.103135PMCID: PMC3589237 Wei Sun, Han Cai, Gloria Zhang, Haiyan Zhang, Haisheng Bao, Li Wang, Jian Ye, Guoying Qian, Chutian Ge Sci Rep. 2017; 7: 4433. Published online 2017 Jun 30. doi: 10.1038/s41598-017-04938-5 Correction in: Sci Rep. 2018; 8: 6322.PMCID: PMC5493664 Kaitlyn A. Webster, Ursula Schach, Angel Ordaz, Jocelyn S. Steinfeld.

DNAH11: Mutations in dynein genes in patients affected by isolated non-syndromic asthenozoospermia. (PMID: 18492703) Zuccarello D . Foresta C Human reproduction (Oxford, England) 2008 3 23 45 58 Mutations in the DNAH11 (axonemal heavy chain dynein type 11) gene cause one form of situs inversus totalis and most likely primary ciliary dyskinesia. (PMID: 12142464) Bartoloni L . Antonarakis SE Proceedings of the National Academy of Sciences of the United States of America 2002 3 4 23 58 Common variatio

DNAJC5B: Ana Claudia Silva Braga, Bruno Moreira Carneiro, Mariana Nogueira Batista, Mônica Mayumi Akinaga, Cíntia Bittar, Paula Rahal PLoS One. 2017; 12(11): e0188467. Published online 2017 Nov 28. doi: 10.1371/journal.pone.0188467PMCID: PMC5705118 Dov Shiffman, Stella Trompet, Judy Z. Louie, Charles M. Rowland, Joseph J. Catanese, Olga A. Iakoubova, Todd G. Kirchgessner, Rudi G. J. Westendorp, Anton J. M. de Craen, P. Eline Slagboom, Brendan M. Buckley, David J. Stott, Naveed Sattar, James J. Devlin

DNER: Du J, Wang X, Zhang X, Zhang X, Jiang H. DNER modulates the length, polarity and synaptogenesis of spiral ganglion neurons via the Notch signaling pathway. Molecular Medicine Reports. 2018;17(2):2357-2365. doi:10.3892/mmr.2017.8115.

DOCK7: Shinichi Nakamuta, Yu-Ting Yang, Chia-Lin Wang, Nicholas B. Gallo, Jia-Ray Yu, Yilin Tai, Linda Van Aelst J Cell Biol. 2017 Dec 4; 216(12): 4313–4330. doi: 10.1083/jcb.201704157PMCID: PMC5716287Yu-Ting Yang, Chia-Lin Wang, Linda Van Aelst Nat Neurosci. 2012 Sep; 15(9): 1201–1210. Published online 2012 Jul 29. doi: 10.1038/nn.3171PMCID: PMC3431462Yilin Tai, Justyna A. Janas, Chia-Lin Wang, Linda Van Aelst Cell Rep. Author manuscript; available in PMC 2015 Jan 30. Published in final edited form a

DOCK8: Shiraishi A, Uruno T, Sanematsu F, et al. DOCK8 Protein Regulates Macrophage Migration through Cdc42 Protein Activation and LRAP35a Protein Interaction. The Journal of Biological Chemistry. 2017;292(6):2191-2202. doi:10.1074/jbc.M116.736306.

DPP6: Lin L, Murphy JG, Karlsson R-M, et al. DPP6 Loss Impacts Hippocampal Synaptic Development and Induces Behavioral Impairments in Recognition, Learning and Memory. Frontiers in Cellular Neuroscience. 2018;12:84. doi:10.3389/fncel.2018.00084.

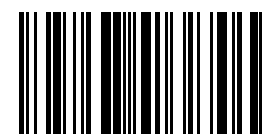
DPYD: Khushman M, Patel GK, Hosein PJ, et al. Germline pharmacogenomics of DPYD*9A (c.85T>C) variant in patients with gastrointestinal malignancies treated with fluoropyrimidines. Journal of Gastrointestinal Oncology. 2018;9(3):416-424. doi:10.21037/jgo.2018.02

DRAM1: DRAM, a p53-induced modulator of autophagy, is critical for apoptosis. (PMID: 16839881) Crighton D . Ryan KM Cell 2006 2 3 4 58 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T . Sugano S Nature genetics 2004 3 4 58 Overexpression of apoptosis-inducing factor mitochondrion-associated 1 (AIFM1) induces apoptosis by promoting the transcription of caspase3 and DRAM in hepatoma cells. (PMID: 29501488) Liu D . Liu K Biochemical and biophysical re

DRD4: Dopamine receptor D4 polymorphism predicts the effect of L-DOPA on gambling behavior. (PMID: 19914604) Eisenegger C . Fehr E Biological psychiatry 2010 Association of VNTR polymorphisms in the MAOA promoter and DRD4 exon 3 with heroin dependence in male Chinese addicts. (PMID: 20218801) Chien CC . Lung FW The world journal of biological psychiatry : the official journal of the World Federation of Societies of Biological Psychiatry 2010 3 23 45 58 Candidate gene studies of ADHD: a meta-analy

DSG2: Overmiller AM, McGuinn KP, Roberts BJ, et al. c-Src/Cav1-dependent activation of the EGFR by Dsg2. Oncotarget. 2016;7(25):37536-37555. doi:10.18632/oncotarget.7675.

DTNBP1: Zhang W, Daly KM, Liang B, et al. BDNF rescues prefrontal dysfunction elicited by pyramidal neuron-specific DTNBP1 deletion in vivo. Journal of Molecular Cell Biology. 2017;9(2):117-131. doi:10.1093/jmcb/mjw029.



E2F3: Gamper I, Burkhart DL, Bywater MJ, et al. Determination of the physiological and pathological roles of E2F3 in adult tissues. *Scientific Reports*. 2017;7:9932. doi:10.1038/s41598-017-09494-6.

ECT2: Lauren P. Huff, Molly J. DeCristo, Dimitri Trembath, Pei Fen Kuan, Margaret Yim, Jinsong Liu, Danielle R. Cook, C. Ryan Miller, Channing J. Der, Adrienne D. Cox *Genes Cancer*. 2013 Nov; 4(11-12): 460–475. doi: 10.1177/1947601913514851 PMID: PMC3877668
Verline Justilien, Syed A. Ali, Lee Jamieson, Ning Yin, Adrienne D. Cox, Channing J. Der, Nicole R. Murray, Alan P. Fields *Cancer Cell*. Author manuscript; available in PMC 2018 Feb 13. Published in final edited form as: *Cancer Cell*. 2017 Feb 13;

EDN1: Tavares ALP, Clouthier DE. Cre recombinase-regulated Endothelin1 transgenic mouse lines: novel tools for analysis of embryonic and adult disorders. *Developmental biology*. 2015;400(2):191-201. doi:10.1016/j.ydbio.2015.01.027.

EDNRA: Genetic polymorphisms in endothelin-receptor-subtype-a-gene as susceptibility factor for obstructive sleep apnea syndrome. (PMID: 20083432) Buck D ... Fietze I *Sleep medicine* 2010 3 23 41 ETB receptor polymorphism is associated with airway obstruction. (PMID: 17470272) Taillé C ... Crestani B *BMC pulmonary medicine* 2007 3 23 41 Association of single nucleotide polymorphisms in endothelin family genes with the progression of atherosclerosis in patients with essential hypertension. (PMID: 17525706) Yasuda H ... Kawano Y *Journal of human hypertension* 2007 3 23 41 Polymorphism in endothelin-related genes limits exercise-induced decreases in arterial stiffness in older subjects. (PMID: 16567585) Iemitsu M ... Matsuda M *Hypertension (Dallas, Tex. : 1979)* 2006 3 23 41 Endothelin axis polymorphisms in patients with scleroderma. (PMID: 16947775) Fonseca C ... Abraham D *Arthritis and rheumatism* 2006

EEPD1: Yuehan Wu, Suk-Hee Lee, Elizabeth A. Williamson, Brian L. Reinert, Ju Hwan Cho, Fen Xia, Aruna Shanker Jaiswal, Gayathri Srinivasan, Bhavita Patel, Alexis Brantley, Daohong Zhou, Lijian Shao, Rupak Pathak, Martin Hauer-Jensen, Sudha Singh, Kimi Kong, Xiaohua Wu, Hyun-Suk Kim, Timothy Beissbarth, Jochen Gaedcke, Sandeep Burma, Jac A. Nickoloff, Robert A. Hromas *PLoS Genet*. 2015 Dec; 11(12): e1005675. Published online 2015 Dec 18. doi: 10.1371/journal.pgen.1005675 PMID: PMC4684289 Hyun-Suk Kim

EHBP1: Li Z, Schulze RJ, Weller SG, et al. A novel Rab10-EHBP1-EHD2 complex essential for the autophagic engulfment of lipid droplets. *Science Advances*. 2016;2(12):e1601470. doi:10.1126/sciadv.1601470.

EHF: Jing Shi, Yiping Qu, Xinru Li, Fang Sui, Demao Yao, Qi Yang, Bingyin Shi, Meiju Ji, Peng Hou *Cell Death Dis*. 2016 Oct; 7(10): e2442. Published online 2016 Oct 27. doi: 10.1038/cddis.2016.346 PMID: PMC5134001 Sara L. Fossum, Michael J. Mutolo, Antonio Tugores, Sujana Ghosh, Scott H. Randell, Lisa C. Jones, Shih-Hsing Leir, Ann Harris *J Biol Chem*. 2017 Jun 30; 292(26): 10938–10949. Published online 2017 May 1. doi: 10.1074/jbc.M117.775304 PMID: PMC5491778 Yanyan Lv, Fang Sui, Jingjing Ma, Xiao

EIF2AK2: Xie M, Yu Y, Kang R, et al. PKM2-dependent glycolysis promotes NLRP3 and AIM2 inflammasome activation. *Nature Communications*. 2016;7:13280. doi:10.1038/ncomms13280.

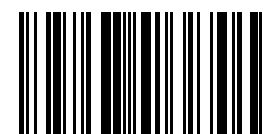
ELAC2: Reinhard L, Sridhara S, Hällberg BM. The MRPP1/MRPP2 complex is a tRNA-maturation platform in human mitochondria. *Nucleic Acids Research*. 2017;45(21):12469-12480. doi:10.1093/nar/gkx902.

ELP4: Zhijie Lin, Weijing Zhao, Wentao Diao, Xingqiao Xie, Zheng Wang, Jinxiu Zhang, Yuequan Shen, Jiafu Long *J Biol Chem*. 2012 Jun 15; 287(25): 21501–21508. Published online 2012 May 2. doi: 10.1074/jbc.M112.341560 PMID: PMC3375571 Pierre Close, Magali Gillard, Aurélie Ladang, Zheshen Jiang, Jessica Papuga, Nicola Hawkes, Laurent Nguyen, Jean-Paul Chapelle, Fabrice Bouillenne, Jesper Svejstrup, Marianne Fillet, Alain Chariot *J Biol Chem*. 2012 Sep 21; 287(39): 32535–32545. Published online 2012 Aug

ENO3: Picard B, Gagaoua M, Al-Jammas M, De Koning L, Valais A, Bonnet M. Beef tenderness and intramuscular fat proteomic biomarkers: muscle type effect. Nakai K, ed. *PeerJ*. 2018;6:e4891. doi:10.7717/peerj.4891.

ENPP1: Wang H, Gonzalez-Garcia I, Traba J, et al. ATP-degrading ENPP1 is required for survival (or persistence) of long-lived plasma cells. *Scientific Reports*. 2017;7:17867. doi:10.1038/s41598-017-18028-z.

ENTPD7: Tordella L, Khan S, Hohmeyer A, et al. SWI/SNF regulates a transcriptional program that induces senescence to prevent liver cancer. *Genes & Development*. 2016;30(19):2187-2198. doi:10.1101/gad.286112.116.



EOMES: Cécile Daussy, Fabrice Faure, Katia Mayol, Sébastien Viel, Georg Gasteiger, Emily Charrier, Jacques Bienvenu, Thomas Henry, Emilie Debien, Uzma A. Hasan, Jacqueline Marvel, Keigyou Yoh, Satoru Takahashi, Immo Prinz, Simon de Bernard, Laurent Buffat, Thierry WalzerJ Exp Med. 2014 Mar 10; 211(3): 563–577. doi: 10.1084/jem.20131560PMCID: PMC3949572Jing Li, Yi He, Jing Hao, Ling Ni, Chen DongFront Immunol. 2018; 9: 2981. Published online 2018 Dec 18. doi: 10.3389/fimmu.2018.02981PMCID: PMC63054

EPCAM: Dollé L, Theise ND, Schmelzer E, Boulter L, Gires O, van Grunsven LA. EpCAM and the biology of hepatic stem/progenitor cells. American Journal of Physiology - Gastrointestinal and Liver Physiology. 2015;308(4):G233-G250. doi:10.1152/ajpgi.00069.2014.

EPHA2: The EPHA2 gene is associated with cataracts linked to chromosome 1p Alan Shiels,corresponding author1,2 Thomas M. Bennett,1 Harry L.S. Knopf,1 Giovanni Maraini,3 Anren Li,4 Xiaodong Jiao,4 and J. Fielding Hejtmancik4 EPHA2 MUTATIONS CONTRIBUTE TO CONGENITAL CATARACT THROUGH DIVERSE MECHANISMS Alpana Dave,1 Sarah Martin,1 Raman Kumar,2,3 Jamie E. Craig,1 Kathryn P. Burdon,1 and Shiwani Sharmacorresponding author1

EPHX1: Václavíková R, Hughes DJ, Souček P. Microsomal Epoxide Hydrolase 1 (EPHX1): Gene, Structure, Function, and Role in Human Disease. Gene. 2015;571(1):1-8. doi:10.1016/j.gene.2015.07.071.

ERBB3: Reif R, Adawy A, Vartak N, et al. Activated ErbB3 Translocates to the Nucleus via Clathrin-independent Endocytosis, Which Is Associated with Proliferating Cells. The Journal of Biological Chemistry. 2016;291(8):3837-3847. doi:10.1074/jbc.M115.686782.

ERCC4: Manandhar M, Boulware KS, Wood RD. The ERCC1 and ERCC4 (XPF) genes and gene products. Gene. 2015;569(2):153-161. doi:10.1016/j.gene.2015.06.026.

ERG: Neil P. Dufton, Claire R. Peghaire, Lourdes Osuna-Almagro, Claudio Raimondi, Viktoria Kalna, Abhishek Chuahan, Gwilym Webb, Youwen Yang, Graeme M. Birdsey, Patricia Lalor, Justin C. Mason, David H. Adams, Anna M. RandiNat Commun. 2017; 8: 895. Published online 2017 Oct 12. doi: 10.1038/s41467-017-01169-0PMCID: PMC5638819 Ashley P. Ng, Yifang Hu, Donald Metcalf, Craig D. Hyland, Helen Ierino, Belinda Phipson, Di Wu, Tracey M. Baldwin, Maria Kauppi, Hiu Kiu, Ladina Di Rago, Douglas J. Hilton.

ERI1: Characterization of 3'hExo, a 3' exonuclease specifically interacting with the 3' end of histone mRNA. (PMID: 16912046) Yang XC . Dominski Z The Journal of biological chemistry 2006 3 4 23 58 Crystallographic structure of the nuclease domain of 3'hExo, a DEDDh family member, bound to rAMP. (PMID: 15451662) Cheng Y . Patel DJ Journal of molecular biology 2004 3 4 23 58 A 3' exonuclease that specifically interacts with the 3' end of histone mRNA. (PMID: 14536070) Dominski Z . Marzluff WF Mole

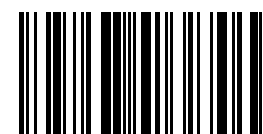
ERRFI1: Junmei Cairns, Brooke L Fridley, Gregory D Jenkins, Yongxian Zhuang, Jia Yu, Liewei WangEMBO Rep. 2018 Mar; 19(3): e44767. Published online 2018 Jan 15. doi: 10.15252/embr.201744767PMCID: PMC5835844Cristina Migliore, Elena Morando, Elena Ghiso, Sergio Anastasi, Vera P Leoni, Maria Apicella, Davide Cora', Anna Sapino, Filippo Pietrantonio, Filippo De Braud, Amedeo Columbano, Oreste Segatto, Silvia GiordanoEMBO Mol Med. 2018 Sep; 10(9): e8746. Published online 2018 Jul 24. doi: 10.15252/emmm.

ESR1: Takeshita T, Yamamoto Y, Yamamoto-Ibusuki M, et al. Clinical significance of monitoring ESR1 mutations in circulating cell-free DNA in estrogen receptor positive breast cancer patients. Oncotarget. 2016;7(22):32504-32518. doi:10.18632/oncotarget.8839.

ESR2: Rumi MAK, Singh P, Roby KF, et al. Defining the Role of Estrogen Receptor ?in the Regulation of Female Fertility. Endocrinology. 2017;158(7):2330-2343. doi:10.1210/en.2016-1916.

ETFDH: High frequency of ETFDH c.250G>A mutation in Taiwanese patients with late-onset lipid storage myopathy. (PMID: 20370797) Lan MY . Chen SS Clinical genetics 2010 3 4 43 56 ETFDH mutations, CoQ10 levels, and respiratory chain activities in patients with riboflavin-responsive multiple acyl-CoA dehydrogenase deficiency. (PMID: 19249206) Liang WC . Nishino I Neuromuscular disorders : NMD 2009 3 4 23 56 The myopathic form of coenzyme Q10 deficiency is caused by mutations in the electron-transferr

ETV5: Zhang J, Cao H, Xie J, et al. The oncogene Etv5 promotes MET in somatic reprogramming and orchestrates epiblast/primitive endoderm specification during mESCs differentiation. Cell Death & Disease. 2018;9(2):224. doi:10.1038/s41419-018-0335-1.



EVA1A: Mengtao Li, Guang Lu, Jia Hu, Xue Shen, Jiabao Ju, Yuanxu Gao, Liuqing Qu, Yan Xia, Yingyu Chen, Yun BaiStem Cell Reports. 2016 Mar 8; 6(3): 396–410. Published online 2016 Feb 18. doi: 10.1016/j.stemcr.2016.01.011PMCID: PMC4788774Xin Lin, Ming Cui, Dong Xu, Dubeiqi Hong, Yan Xia, Chentong Xu, Riyong Li, Xuan Zhang, Yaxin Lou, Qihua He, Ping Lv, Yingyu ChenCell Death Dis. 2018 Jul; 9(7): 768. Published online 2018 Jul 10. doi: 10.1038/s41419-018-0800-x PMCID: PMC6039435 Shu Zhang, Xin Lin.

EVI5: Didonna A, Isobe N, Caillier SJ, et al. A non-synonymous single-nucleotide polymorphism associated with multiple sclerosis risk affects the EVI5 interactome. Human Molecular Genetics. 2015;24(24):7151-7158. doi:10.1093/hmg/ddv412.

F12: Gao WND, Carpentier DCJ, Ewles HA, Lee S, Smith GL. Vaccinia virus proteins A36 and F12/E2 show strong preferences for different kinesin light chain isoforms. Traffic (Copenhagen, Denmark). 2017;18(8):505-518. doi:10.1111/tra.12494.

F13A1: Peltier J, Roperch J-P, Audebert S, Borg J-P, Camoin L. Activation peptide of the coagulation factor XIII (AP-F13A1) as a new biomarker for the screening of colorectal cancer. Clinical Proteomics. 2018;15:15. doi:10.1186/s12014-018-9191-3.

F13B: Guo Z-P, Hou H-T, Jing R, Song Z-G, Liu X-C, He G-W. Plasma protein profiling in patients undergoing coronary artery bypass grafting surgery and clinical significance. Oncotarget. 2017;8(36):60528-60538. doi:10.18632/oncotarget.16366.

F2: Kamal RP, Alymova IV, York IA. Evolution and Virulence of Influenza A Virus Protein PB1-F2. International Journal of Molecular Sciences. 2018;19(1):96. doi:10.3390/ijms19010096.

F5: Guo J, Chan EWC, Chen S. Mechanism of substrate recognition by the novel Botulinum Neurotoxin subtype F5. Scientific Reports. 2016;6:19875. doi:10.1038/srep19875.

F7: Montagne A, Nikolakopoulou AM, Zhao Z, et al. Pericyte degeneration causes white matter dysfunction in the mouse CNS. Nature medicine. 2018;24(3):326-337. doi:10.1038/nm.4482.

F9: Wurpel DJ, Totsika M, Allsopp LP, et al. F9 Fimbriae of Uropathogenic Escherichia coli Are Expressed at Low Temperature and Recognise Gal?1-3GlcNAc-Containing Glycans. Cascales E, ed. PLoS ONE. 2014;9(3):e93177. doi:10.1371/journal.pone.0093177.

FABP2: Esteves A, Knoll-Gellida A, Canclini L, Silvarrey MC, André M, Babin PJ. Fatty acid binding proteins have the potential to channel dietary fatty acids into enterocyte nuclei. Journal of Lipid Research. 2016;57(2):219-232. doi:10.1194/jlr.M062232.

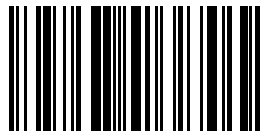
FADS1: Anthony D. Gromovsky, Rebecca C. Schugar, Amanda L. Brown, Robert N. Helsley, Amy C. Burrows, Daniel Ferguson, Renliang Zhang, Brian E. Sansbury, Richard G. Lee, Richard E. Morton, Daniela S. Allende, John S. Parks, Matthew Spite, J. Mark BrownArterioscler Thromb Vasc Biol. Author manuscript; available in PMC 2019 Jan 1. Published in final edited form as: Arterioscler Thromb Vasc Biol. 2018 Jan; 38(1): 218–231. Published online 2017 Oct 26. doi: 10.1161/ATVBAHA.117.309660PMCID: PMC5746431Lin

FADS2: Xie D, Fu Z, Wang S, et al. Characteristics of the fads2 gene promoter in marine teleost Epinephelus coioides and role of Sp1-binding site in determining promoter activity. Scientific Reports. 2018;8:5305. doi:10.1038/s41598-018-23668-w.

FAM124A: Wang K, Gao M, Yang M, et al. Transcriptome analysis of bronchoalveolar lavage fluid from children with severe Mycoplasma pneumoniae pneumonia reveals novel gene expression and immunodeficiency. Human Genomics. 2017;11:4. doi:10.1186/s40246-017-0101-y.

FAM129A: Alexandra G. Evstafieva, Irina E. Kovaleva, Maria S. Shoshinova, Andrei V. Budanov, Peter M. ChumakovPLoS One. 2018; 13(2): e0191107. Published online 2018 Feb 8. doi: 10.1371/journal.pone.0191107PMCID: PMC5805170Eva Sigstad, Elisabeth Paus, Trine Bjørro, Aasmund Berner, Krystyna Kotanska Grøholt, Lars H Jørgensen, Manuel Sobrinho-Simões, Ruth Holm, David J WarrenMod Pathol. 2012 Apr; 25(4): 537–547. Published online 2011 Dec 9. doi: 10.1038/modpathol.2011.188 PMCID: PMC3318159 Greg L. Shaw

FAM171A2: Schlesinger S, Kaffe B, Melcer S, et al. A hyperdynamic H3.3 nucleosome marks promoter regions in pluripotent embryonic stem cells. Nucleic Acids Research. 2017;45(21):12181-12194. doi:10.1093/nar/gkx817.



FAM19A2: Geoffrey A. Walford, Stefan Gustafsson, Denis Rybin, Alena Stanáková, Han Chen, Ching-Ti Liu, Jaeyoung Hong, Richard A. Jensen, Ken Rice, Andrew P. Morris, Reedik Mägi, Anke Tönjes, Inga Prokopenko, Marcus E. Kleber, Graciela Delgado, Günther Silbernagel, Anne U. Jackson, Emil V. Appel, Niels Grarup, Joshua P. Lewis, May E. Montasser, Claes Landenvall, Harald Staiger, Jian'an Luan, Timothy M. Frayling, Michael N. Weedon, Weijia Xie, Sonsoles Morcillo, María Teresa Martínez-Larrad.

FAM209B: You Li, Xiaosheng Wang, Suleyman Vural, Nitish K. Mishra, Kenneth H. Cowan, Chittibabu Guda PLoS One. 2015; 10(3): e0119383. Published online 2015 Mar 24. doi: 10.1371/journal.pone.0119383 PMID: PMC4372331 Anastasia G. Efthymiou, Alison M. Goate Mol Neurodegener. 2017; 12: 43. Published online 2017 May 26. doi: 10.1186/s13024-017-0184-x PMID: PMC5446752

FAM47E: Redenšek S, Trošt M, Dolžan V. Genetic Determinants of Parkinson's Disease: Can They Help to Stratify the Patients Based on the Underlying Molecular Defect? Frontiers in Aging Neuroscience. 2017;9:20. doi:10.3389/fnagi.2017.00020.

FAM58A: Guen VJ, Gamble C, Perez DE, et al. STAR syndrome-associated CDK10/Cyclin M regulates actin network architecture and ciliogenesis . Cell Cycle. 2016;15(5):678-688. doi:10.1080/15384101.2016.1147632.

FAM69A: Ohtsubo Y, Nagata Y, Tsuda M. Efficient N-tailing of blunt DNA ends by Moloney murine leukemia virus reverse transcriptase. Scientific Reports. 2017;7:41769. doi:10.1038/srep41769.

FAM71F1: Ur Rehman Z, Khan FA, Farmanullah, et al. Transcriptome profiling of anti-müllerian hormone treated preantral/small antral mouse ovary follicles. Oncotarget. 2018;9(54):30253-30267. doi:10.18632/oncotarget.25572.

FANCA: Liangyue Qian, Fenghua Yuan, Paola Rodriguez-Tello, Suyog Padgaonkar, Yanbin Zhang PLoS One. 2013; 8(12): e82666. Published online 2013 Dec 4. doi: 10.1371/journal.pone.0082666 PMID: PMC3857783 Anaïd Benitez, Fenghua Yuan, Satoshi Nakajima, Leizhen Wei, Liangyue Qian, Richard Myers, Jennifer J. Hu, Li Lan, Yanbin Zhang Nucleic Acids Res. 2014 Feb; 42(3): 1671–1683. Published online 2013 Oct 28. doi: 10.1093/nar/gkt975 PMID: PMC3919598 Patrycja Pawlikowska, Pierre Fouchet, William Vainchenker

FANCE: Isolation of a cDNA representing the Fanconi anemia complementation group E gene. (PMID: 11001585) de Winter JP . Joenje H American journal of human genetics 2000 2 3 4 23 58 Regulation of Rev1 by the Fanconi anemia core complex. (PMID: 22266823) Kim H . D'Andrea AD Nature structural & molecular biology 2012 3 4 58 Comprehensive screen of genetic variation in DNA repair pathway genes and postmenopausal breast cancer risk. (PMID: 20496165) Monsees GM . Han J Breast cancer research and treatm

FANCL: Miles JA, Frost MG, Carroll E, et al. The Fanconi Anemia DNA Repair Pathway Is Regulated by an Interaction between Ubiquitin and the E2-like Fold Domain of FANCL. The Journal of Biological Chemistry. 2015;290(34):20995-21006. doi:10.1074/jbc.M115.675835.

FANCM: Wang H, Li S, Oaks J, Ren J, Li L, Wu X. The concerted roles of FANCM and Rad52 in the protection of common fragile sites. Nature Communications. 2018;9:2791. doi:10.1038/s41467-018-05066-y.

FARP1: Lucas Cheadle, Thomas Biederer J Cell Biol. 2012 Dec 10; 199(6): 985–1001. doi: 10.1083/jcb.201205041 PMID: PMC3518221 Lucas Cheadle, Thomas Biederer J Neurosci. 2014 Jun 4; 34(23): 7999–8009. doi: 10.1523/JNEUROSCI.3950-13.2014 PMID: PMC4044256 Yi-Chun Kuo, Xiaojing He, Andrew J. Coleman, Yu-Ju Chen, Pranathi Dasari, Jen Liou, Thomas Biederer, Xuewu Zhang Sci Rep. 2018; 8: 10477. Published online 2018 Jul 11. doi: 10.1038/s41598-018-28692-4 PMID: PMC6041286

FASLG: Li Y, Sun Y, Cai M, et al. Fas Ligand Gene (Faslg) Plays an Important Role in Nerve Degeneration and Regeneration After Rat Sciatic Nerve Injury. Frontiers in Molecular Neuroscience. 2018;11:210. doi:10.3389/fnmol.2018.00210.

FBP1: Bo Wang, Ping Fan, Jingyuan Zhao, Heyu Wu, Xin Jin, Heshui Wu J Exp Clin Cancer Res. 2018; 37: 224. Published online 2018 Sep 10. doi: 10.1186/s13046-018-0888-y PMID: PMC6131902 Updesh Dixit, Ashutosh K. Pandey, Zhihe Liu, Sushil Kumar, Matthew B. Neiditch, Kenneth M. Klein, Virendra N. Pandey J Virol. 2015 Aug 1; 89(15): 7905–7921. Published online 2015 May 20. doi: 10.1128/JVI.00729-15 Correction in: J Virol. 2017 Dec 1; 91(23): e01609-17. PMID: PMC4505638 Jing Yang, Xin Jin, Yuqian Yan, Yingj

Name	Sample		
Age	Gender	F	Report date
Prescriber		Health insurance	
12/09/2025			



FCBSD1: Almeida-Souza L, Frank RAW, García-Nafría J, et al. A Flat BAR Protein Promotes Actin Polymerization at the Base of Clathrin-Coated Pits. *Cell*. 2018;174(2):325-337.e14. doi:10.1016/j.cell.2018.05.020.

FCRL3: Zhang H, Zhang Z, Li G, Wang S, Zhang S, Xie B. Association of FCRL3 Genetic Polymorphisms With Endometriosis-Related Infertility Risk: An Independent Study in Han Chinese. Marco A, ed. *Medicine*. 2015;94(35):e1168. doi:10.1097/MD.0000000000001168.

FDPS: Abate M, Laezza C, Pisanti S, et al. Deregulated expression and activity of Farnesyl Diphosphate Synthase (FDPS) in Glioblastoma. *Scientific Reports*. 2017;7:14123. doi:10.1038/s41598-017-14495-6.

FGD6: Thongnak C, Hnoonual A, Tangviriyapaiboon D, et al. Whole-Exome Sequencing Identifies One De Novo Variant in the FGD6 Gene in a Thai Family with Autism Spectrum Disorder. *International Journal of Genomics*. 2018;2018:8231547. doi:10.1155/2018/8231547.

FGF20: Biggs LC, Mäkelä OJ, Myllymäki S-M, et al. Hair follicle dermal condensation forms via Fgf20 primed cell cycle exit, cell motility, and aggregation. Horsley V, Schekman R, eds. *eLife*. 2018;7:e36468. doi:10.7554/eLife.36468.

FGF21: Different roles of N- and C- termini in the functional activity of FGF21. (PMID: 19117008) Micanovic R . Kharitononkov A *Journal of cellular physiology* 2009 3 4 23 58 Identification of a novel FGF, FGF-21, preferentially expressed in the liver. (PMID: 10858549) Nishimura T . Itoh N *Biochimica et biophysica acta* 2000 2 3 4 58 Serum fibroblast growth factor 21 levels in gestational diabetes mellitus in relation to insulin resistance and dyslipidemia. (PMID: 19699495) Stein S . Fasshauer M *Met*

FGF7: Genome-wide association study identifies four genetic loci associated with thyroid volume and goiter risk. (PMID: 21565293) Teumer A . Völzke H *American journal of human genetics* 2011 3 45 58 Maternal genes and facial clefts in offspring: a comprehensive search for genetic associations in two population-based cleft studies from Scandinavia. (PMID: 20634891) Jugessur A . Murray JC *PloS one* 2010 3 45 58 The effects of TGF-alpha, IL-1beta and PDGF on fibroblast adhesion to ECM-derived matrix a

FGFR2: Molotkov A, Mazot P, Brewer JR, Cinalli RM, Soriano P. Distinct Requirements for Fgfr1 and Fgfr2 in Primitive Endoderm Development and Exit from Pluripotency. *Developmental cell*. 2017;41(5):511-526.e4. doi:10.1016/j.devcel.2017.05.004.

FGFR3: Mélanie Mahe, Florent Dufour, Hélène Neyret-Kahn, Aura Moreno-Vega, Claire Beraud, Mingjun Shi, Imene Hamaidi, Virginia Sanchez-Quiles, Clementine Krucker, Marion Dorland-Galliot, Elodie Chapeaublanc, Remy Nicolle, Hervé Lang, Celio Pouponnot, Thierry Massfelder, François Radvanyi, Isabelle Bernard-Pierrot *EMBO Mol Med*. 2018 Apr; 10(4): e8163. Published online 2018 Feb 20. doi: 10.15252/emmm.201708163 PMID: PMC5887543 Siru Zhou, Yangli Xie, Junzhou Tang, Junlan Huang, Qizhao Huang, Wei Xu, Zu

FGFR4: Quintanal-Villalonga Á, Ojeda-Márquez L, Marrugal Á, et al. The FGFR4-388arg Variant Promotes Lung Cancer Progression by N-Cadherin Induction. *Scientific Reports*. 2018;8:2394. doi:10.1038/s41598-018-20570-3.

FKBP5: Criado-Marrero M, Morales Silva RJ, Velazquez B, et al. Dynamic expression of FKBP5 in the medial prefrontal cortex regulates resiliency to conditioned fear. *Learning & Memory*. 2017;24(4):145-152. doi:10.1101/lm.043000.116.

FLJ10986: Singh C, Glaab E, Linster CL. Molecular Identification of d-Ribulokinase in Budding Yeast and Mammals. *The Journal of Biological Chemistry*. 2017;292(3):1005-1028. doi:10.1074/jbc.M116.760744.

FLJ25967: Tosolini M, Pont F, Poupot M, et al. Assessment of tumor-infiltrating TCRV?9V?2 ?? lymphocyte abundance by deconvolution of human cancers microarrays. *Oncoimmunology*. 2017;6(3):e1284723. doi:10.1080/2162402X.2017.1284723.

FLJ33534: Wan X, Huang W, Yang S, et al. Identification of androgen-responsive lncRNAs as diagnostic and prognostic markers for prostate cancer. *Oncotarget*. 2016;7(37):60503-60518. doi:10.18632/oncotarget.11391.

FMN2: Agís-Balboa RC, Pinheiro PS, Rebola N, et al. Formin 2 links neuropsychiatric phenotypes at young age to an increased risk for dementia. *The EMBO Journal*. 2017;36(19):2815-2828. doi:10.15252/embj.201796821.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



FM03: Shih DM, Wang Z, Lee R, et al. Flavin containing monooxygenase 3 exerts broad effects on glucose and lipid metabolism and atherosclerosis. *Journal of Lipid Research*. 2015;56(1):22-37. doi:10.1194/jlr.M051680.

FOLR3: Davidson B, Abeler VM, Førsund M, et al. Gene expression signatures of primary and metastatic uterine leiomyosarcoma. *Human pathology*. 2014;45(4):691-700. doi:10.1016/j.humpath.2013.11.003.

FOX1: Bullock M, Lim G, Li C, et al. Thyroid transcription factor FOXE1 interacts with ETS factor ELK1 to co-regulate TERT. *Oncotarget*. 2016;7(52):85948-85962. doi:10.18632/oncotarget.13288.

FRMD4A: Zheng X, Jia B, Lin X, et al. FRMD4A: A potential therapeutic target for the treatment of tongue squamous cell carcinoma. *International Journal of Molecular Medicine*. 2016;38(5):1443-1449. doi:10.3892/ijmm.2016.2745.

FRZB: Mitsiadis TA, Pagella P, Cantù C. Early Determination of the Periodontal Domain by the Wnt-Antagonist Frzb/Sfrp3. *Frontiers in Physiology*. 2017;8:936. doi:10.3389/fphys.2017.00936.

FSIP1: Meisi Yan, Jinsong Wang, Yanlv Ren, Lin Li, Weidan He, Ying Zhang, Tong Liu, Zhigao LiCell Death Dis. 2019 Mar; 10(3): 204. Published online 2019 Feb 27. doi: 10.1038/s41419-018-1248-8PMCID: PMC6393503 Tong Liu, Hao Zhang, Li Sun, Danyu Zhao, Peng Liu, Meisi Yan, Neeha Zaidi, Sudeh Izadmehr, Animesh Gupta, Wahid Abu-Amer, Minna Luo, Jie Yang, Xunyan Ou, Yining Wang, Xuefeng Bai, Yan Wang, Maria I. New, Mone Zaidi, Tony Yuen, Caigang LiuProc Natl Acad Sci U S A. 2017 Jul 18;

FTCDNL1: Dobbyn A, Huckins LM, Boocock J, et al. Landscape of Conditional eQTL in Dorsolateral Prefrontal Cortex and Co-localization with Schizophrenia GWAS. *American Journal of Human Genetics*. 2018;102(6):1169-1184. doi:10.1016/j.ajhg.2018.04.011.

FTL: L-Ferritin: One Gene, Five Diseases; from Hereditary Hyperferritinemia to Hypoferritinemia-Report of New Cases Beatriz Cadenas,1,2,3 Josep Fita-Torró,4 Mar Bermúdez-Cortés,5 Inés Hernandez-Rodriguez,6 José Luis Fuster,5 María Esther Llinares,5 Ana María Galera,5 Julia Lee Romero,7 Santiago Pérez-Montero,4 Cristian Tornador,1,4 and Mayka Sanchez Human L-ferritin deficiency is characterized by idiopathic generalized seizures and atypical restless leg syndrome. Cozzi A1, Santambrogio P, Privit

FTO: Y.C. Loraine Tung, Pawan Gulati, Che-Hsiung Liu, Debra Rimmington, Rowena Dennis, Marcella Ma, Vladimir Saudek, Stephen O'Rahilly, Anthony P. Coll, Giles S.H. YeoMol Metab. 2015 Apr; 4(4): 287-298. Published online 2015 Feb 7. doi: 10.1016/j.molmet.2015.01.011 PMCID: PMC4354923Daniel P. S. Osborn, Rosa Maria Roccasecca, Fiona McMurray, Victor Hernandez-Hernandez, Sriparna Mukherjee, Inês Barroso, Derek Stemple, Roger Cox, Philip L. Beales, Sonia Christou-SavinaPLoS One. 2014; 9(2): e87662. Fat mass and obesity-associated (FTO) and leptin receptor (LEPR) gene polymorphisms in Egyptian obese subjects. (PMID: 30767572) Ali EMM ... Settin A Archives of physiology and biochemistry 2021 3 Effect of Posttranslational Modifications on the Structure and Activity of FTO Demethylase. (PMID: 33925955) Marcinkowski M ... Poznański J International journal of molecular sciences 2021 3 Association of FTO gene methylation with incident type 2 diabetes mellitus: A nested case-control study. (PMID: 33753148) Huang S ... Hu D Gene 2021 3 Variants in the Obesity-Linked FTO gene locus modulates psychopathological features of patients with Anorexia Nervosa. (PMID: 33737121) González LM ... Gervasini G Gene 2021



Name	Sample			
Age	Gender	F	Report date	12/09/2025
Prescriber	Health insurance			



FUT2: Velkova A, Diaz JEL, Pangilinan F, et al. The FUT2 secretor variant p.Trp154Ter influences serum vitamin B12 concentration via holo-haptocorrin, but not holo-transcobalamin, and is associated with haptocorrin glycosylation. Human Molecular Genetics. 2017; The role of the blood group-related glycosyltransferases FUT2 and B4GALNT2 in susceptibility to infectious disease. (PMID: 33662872) Galeev A ... Grassl GA International journal of medical microbiology : IJMM 2021 3 Maternal Fucosyltransferase 2 Status Associates with the Profiles of Human Milk Oligosaccharides and the Fecal Microbiota Composition of Breastfed Infants. (PMID: 33677972) Liu F ... Guo H Journal of agricultural and food chemistry 2021 Interactome Mapping Provides a Network of Neurodegenerative Disease Proteins and Uncovers Widespread Protein Aggregation in Affected Brains. (PMID: 32814053) Haenig C ... Wanker EE Cell reports 2020 3 Association of FUT2 and ABO with Crohn's disease in Koreans. (PMID: 31260595) Ye BD ... Song K Journal of gastroenterology and hepatology 2020 3 "FUT2" a potential genetic modifier in NCF1 deficiency. (PMID: 31494296) Bargir UA ... Madkaikar MR The journal of allergy and clinical immunology. In practice 2020 3 Genetic Manipulation of Human Intestinal Enteroids Demonstrates the Necessity of a Functional Fucosyltransferase 2 Gene for Secretor-Dependent Human Norovirus Infection. (PMID: 32184242) Haga K ... Estes MK mBio 2020 3 Can the FUT 2 Gene Variant Have an Effect on the Body Weight of Patients Undergoing Bariatric Surgery?-Preliminary, Exploratory Study. (PMID: 32872099) Komorniak N ... Stachowska E Nutrients 2020

FUT8: Praveen Agrawal, Barbara Fontanals-Cirera, Elena Sokolova, Samson Jacob, Christopher A. Vaiana, Diana Argibay, Veronica Davalos, Meagan McDermott, Shruti Nayak, Farbod Darvishian, Mireia Castillo, Beatrix Ueberheide, Iman Osman, David Fenyő, Lara K. Mahal, Eva HernandoCancer Cell. Author manuscript; available in PMC 2018 Jun 12. Published in final edited form as: Cancer Cell. 2017 Jun 12; 31(6): 804–819.e7. doi: 10.1016/j.ccell.2017.05.007PMCID: PMC5649440Cheng-Fen Tu, Meng-Ying Wu.

FYCO1: Da Ros M, Lehtiniemi T, Olotu O, et al. FYCO1 and autophagy control the integrity of the haploid male germ cell-specific RNP granules. Autophagy. 2017;13(2):302-321. doi:10.1080/15548627.2016.1261319.

G6PD: Recht J, Ashley EA, White NJ. Use of primaquine and glucose-6-phosphate dehydrogenase deficiency testing: Divergent policies and practices in malaria endemic countries. Sinnis P, ed. PLoS Neglected Tropical Diseases. 2018;12(4):e0006230. doi:10.1371/journ

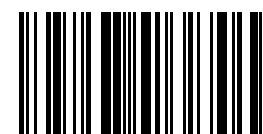
GAB2: Zhang X, Lavoie G, Méant A, et al. Extracellular Signal-Regulated Kinases 1 and 2 Phosphorylate Gab2 To Promote a Negative-Feedback Loop That Attenuates Phosphoinositide 3-Kinase/Akt Signaling. Molecular and Cellular Biology. 2017;37(7):e00357-16. doi:10.

GABPB1: Zhu W, Swaminathan G, Plowey ED. GA binding protein augments autophagy via transcriptional activation of BECN1-PIK3C3 complex genes. Autophagy. 2014;10(9):1622-1636. doi:10.4161/auto.29454.

GABRB3: Ryan J. Delahanty, Yanfeng Zhang, Terry Jo Bichell, Wangzhen Shen, Kelienne Verdier, Robert L. Macdonald, Lili Xu, Kelli Boyd, Janice Williams, Jing-Qiong KangCell Rep. Author manuscript; available in PMC 2017 Dec 20. Published in final edited form as: Cell Rep. 2016 Dec 20; 17(12): 3115-3124. doi: 10.1016/j.celrep.2016.11.067PMCID: PMC5240804Audrey A Mercer, Kristin J Palarz, Nino Tabatadze, Catherine S Woolley, Indira M RamaneLife. 2016; 5: e07596. Published online 2016 Apr 14. doi: 10.75

GAD1: Wang M, Cai E, Fujiwara N, et al. Odorant Sensory Input Modulates DNA Secondary Structure Formation and Heterogeneous Ribonucleoprotein Recruitment on the Tyrosine Hydroxylase and Glutamic Acid Decarboxylase 1 Promoters in the Olfactory Bulb. The Journal





GAL: Interactome Mapping Provides a Network of Neurodegenerative Disease Proteins and Uncovers Widespread Protein Aggregation in Affected Brains. (PMID: 32814053) Haenig C ... Wanker EE Cell reports 2020 3 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA Nature 2020 3 Review: Occurrence and Distribution of Galanin in the Physiological and Inflammatory States in the Mammalian Gastrointestinal Tract. (PMID: 33552060) Brzozowska M ... Całka J Frontiers in immunology 2020 Galanin pathogenic mutations in temporal lobe epilepsy. (PMID: 25691535) Guipponi M ... Antonarakis SE Human molecular genetics 2015 3 4 70 Polymorphisms in the galanin gene are associated with symptom-severity in female patients suffering from panic disorder. (PMID: 17573119) Unschuld PG ... Keck ME Journal of affective disorders 2008 3 21 39 Alcoholism is associated with GALR3 but not two other galanin receptor genes. (PMID: 17083333) Belfer I ... Enoch MA Genes, brain, and behavior 2007 3 21 39 Association of galanin haplotypes with alcoholism and anxiety in two ethnically distinct populations. (PMID: 16314872) Belfer I ... Enoch MA Molecular psychiatry 2006 3 21 39 Human galanin (GAL) and galanin 1 receptor (GALR1) variations are not involved in fat intake and early onset obesity. (PMID: 15930442) Schäuble N ... Hinney A The Journal of nutrition 2005

GALNT3: Nakamura S, Horie M, Daidoji T, et al. Influenza A Virus-Induced Expression of a GalNAc Transferase, GALNT3, via MicroRNAs Is Required for Enhanced Viral Replication. Dermody TS, ed. Journal of Virology. 2016;90(4):1788-1801. doi:10.1128/JVI.02246-15.

GALT: Zhang F, Zhao Q, Quan K, et al. Galactose-1-phosphate uridylyltransferase (GalT), an in vivo-induced antigen of Actinobacillus pleuropneumoniae serovar 5b strain L20, provided immunoprotection against serovar 1 strain MS71. Ho PL, ed. PLoS ONE. 2018;13(6):e

GATA2: Kaimakis P, de Pater E, Eich C, et al. Functional and molecular characterization of mouse Gata2-independent hematopoietic progenitors. Blood. 2016;127(11):1426-1437. doi:10.1182/blood-2015-10-673749.

GATA3: Ku C-J, Sekiguchi JM, Panwar B, et al. GATA3 Abundance Is a Critical Determinant of T Cell Receptor ? Allelic Exclusion. Molecular and Cellular Biology. 2017;37(12):e00052-17. doi:10.1128/MCB.00052-17.

GATA4: Cayla A. Thompson, Kevin Wojta, Kirthi Pulakanti, Sridhar Rao, Paul Dawson, Michele A. BattleCell Mol Gastroenterol Hepatol. 2017 May; 3(3): 422–446. Published online 2017 Jan 24. doi: 10.1016/j.jcmgh.2016.12.009PMCID: PMC5404030 Su-Ren Chen, Ji-Xin Tang, Jin-Mei Cheng, Jian Li, Cheng Jin, Xiao-Yu Li, Shou-Long Deng, Yan Zhang, Xiu-Xia Wang, Yi-Xun LiuOncotarget. 2015 Nov 10; 6(35): 37012–37027. Published online 2015 Oct 14. doi: 10.18632/oncotarget.6115PMCID: PMC4741912 Boni A. Afouda.

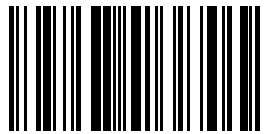
GATM: Turer E, McAlpine W, Wang K, et al. Creatine maintains intestinal homeostasis and protects against colitis. Proceedings of the National Academy of Sciences of the United States of America. 2017;114(7):E1273-E1281. doi:10.1073/pnas.1621400114.

GBF1: Chen J, Wu X, Yao L, et al. Impairment of Cargo Transportation Caused by gbf1 Mutation Disrupts Vascular Integrity and Causes Hemorrhage in Zebrafish Embryos. The Journal of Biological Chemistry. 2017;292(6):2315-2327. doi:10.1074/jbc.M116.767608.

GC: Bowman MJ, Pulman JA, Liu TL, Childs KL. A modified GC-specific MAKER gene annotation method reveals improved and novel gene predictions of high and low GC content in Oryza sativa. BMC Bioinformatics. 2017;18:522. doi:10.1186/s12859-017-1942-z.

GCG: Homozygous carriers of the G allele of rs4664447 of the glucagon gene (GCG) are characterised by decreased fasting and stimulated levels of insulin, glucagon and glucagon-like peptide (GLP)-1 S. S. Torekov, L. Ma, N. Grarup, B. Hartmann, I. A. Hainerová, U. Kielgast, H. Kissow, M. Rosenkilde, GIANT Consortium, J. Lebl, D. R. Witte, T. Jørgensen, A. Sandbaek, T. Lauritzen, O. D. Madsen, J. Wang, A. Linneberg, S. Madsbad, J. J. Holst, T. Hansen & O. Pedersen

GCH1: Gillian Douglas, Ashley B. Hale, Mark J Crabtree, Brent J. Ryan, Alex Hansler, Katrin Watschinger, Steven S Gross, Craig A. Lygate, Nicholas J. Alp, Keith M. ChannonDev Biol. 2015 Mar 1; 399(1): 129–138. doi: 10.1016/j.ydbio.2014.12.025 PMCID: PMC4347993 Katja Zschiebsch, Caroline Fischer, Annett Wilken-Schmitz, Gerd Geisslinger, Keith Channon, Katrin Watschinger, Irmgard TegederJ Cell Mol Med. 2019 Feb; 23(2): 985–1000. Published online 2018 Nov 18.



GCK: Matthew G. Rees, Mindy I. Davis, Min Shen, Steve Titus, Anne Raimondo, Amy Barrett, Anna L. Gloyn, Francis S. Collins, Anton SimeonovPLoS One. 2014; 9(2): e89335. Published online 2014 Feb 19. doi: 10.1371/journal.pone.0089335PMCID: PMC3929664Brian Lu, Kiran Kurmi, Miguel Munoz-Gomez, Egon J. Jacobus Ambuludi, Jason M. Tonne, Kuntol Rakshit, Taro Hitosugi, Yogish C. Kudva, Aleksey V. Matveyenko, Yasuhiro IkedaDis Model Mech. 2018 Jun 1; 11(6): dmm033316. Published online 2018 Jun 13. doi: 1

GCKR: Zhao Yang Wang, Ling Jin, Huanran Tan, David M. IrwinPLoS One. 2013; 8(4): e60896. Published online 2013 Apr 1. doi: 10.1371/journal.pone.0060896PMCID: PMC3613411Ling Jin, Tingting Guo, Zhixin Li, Zhen Lei, Hui Li, Yiqing Mao, Xi Wang, Na Zhou, Yizhuang Zhang, Ruobi Hu, Xuehui Zhang, Gang Niu, David M. Irwin, Huanran TanInt J Mol Sci. 2015 Apr; 16(4): 7377–7393. Published online 2015 Apr 2. doi: 10.3390/ijms16047377PMCID: PMC4425023Maykel López Rodríguez, Lilian Fernandes Silva, Jagadish Va

GCLC: Cristina Espinosa-Díez, Verónica Miguel, Susana Vallejo, Francisco J. Sánchez, Elena Sandoval, Eva Blanco, Pablo Cannata, Concepción Peiró, Carlos F. Sánchez-Ferrer, Santiago LamasRedox Biol. 2018 Apr; 14: 88–99. Published online 2017 Sep 1. doi: 10.1016/j.redox.2017.08.019PMCID: PMC5596265Alexey Moskalev, Mikhail Shaposhnikov, Ekaterina Proshkina, Alexey Belyi, Alexander Fedintsev, Svetlana Zhikrivetskaya, Zulfiya Guvatova, Asiya Sadritdinova, Anastasia Snezhkina, George Krasnov, Anna Kudr

GCLM: Jinhwan Lim, Brooke N. Nakamura, Isaac Mohar, Terrance J. Kavanagh, Ulrike LudererEndocrinology. 2015 Sep; 156(9): 3329–3343. Published online 2015 Jun 17. doi: 10.1210/en.2015-1206PMCID: PMC4541624Chad S. Weldy, Ian P. Luttrell, Collin C. White, Vicki Morgan-Stevenson, Theo K. Bammler, Richard P. Beyer, Zahra Afsharinejad, Francis Kim, Kanchan Chitaley, Terrance J. KavanaghFree Radic Biol Med. Author manuscript; available in PMC 2013 Sep 15.Published in final edited form as: Free Radic Bio

GDAP1: Manuela Barneo-Muñoz, Paula Juárez, Azahara Civera-Tregón, Laura Yndriago, David Pla-Martin, Jennifer Zenker, Carmen Cuevas-Martín, Anna Estela, María Sánchez-Aragó, Jerónimo Forteza-Vila, José M. Cuezva, Roman Chrast, Francesc PalauPLoS Genet. 2015 Apr; 11(4): e1005115. Published online 2015 Apr 10. doi: 10.1371/journal.pgen.1005115PMCID: PMC4393229Axel Niemann, Nina Huber, Konstanze M. Wagner, Christian Somandin, Michael Horn, Frédéric Lebrun-Julien, Brigitte Angst, Jorge A. Pereira, Hart

GDF5: Ratnayake M, Tselepi M, Bloxham R, Plöger F, Reynard LN, Loughlin J. A consistent and potentially exploitable response during chondrogenesis of mesenchymal stem cells from osteoarthritis patients to the protein encoded by the susceptibility gene GDF5. Ser

GGCX: Okubo Y, Masuyama R, Iwanaga A, et al. Calcification in dermal fibroblasts from a patient with GGCX syndrome accompanied by upregulation of osteogenic molecules. Tintut Y, ed. PLoS ONE. 2017;12(5):e0177375. doi:10.1371/journal.pone.0177375.

GHRL: Wu S, Liu J, Wang X, Li M, Chen Z, Tang Y. Aberrant Expression of the Long Non-coding RNA GHRLOS and Its Prognostic Significance in Patients with Colorectal Cancer. Journal of Cancer. 2017;8(19):4040-4047. doi:10.7150/jca.21304.

GHSR: Edwards A, Abizaid A. Clarifying the Ghrelin System's Ability to Regulate Feeding Behaviours Despite Enigmatic Spatial Separation of the GHSR and Its Endogenous Ligand. Dickson SL, ed. International Journal of Molecular Sciences. 2017;18(4):859. doi:10.33

GJA8: The impact of GJA8 SNPs on susceptibility to age-related cataract. Yu X, et al. Hum Genet, 2018 Dec. PMID 30349978 Detection of c.139G>A (D47N) mutation in GJA8 gene in an extended family with inheritance of autosomal dominant zonular cataract without pulverulent opacities by exome sequencing. Gunda P, et al. J Genet, 2018 Sep. PMID 30262699

Name Sample

Age

Gender

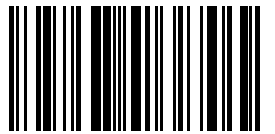
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

GLP1R: Crystal structure of glucagon-like peptide-1 in complex with the extracellular domain of the glucagon-like peptide-1 receptor. (PMID: 19861722) Underwood CR ... Reedtz-Runge S The Journal of biological chemistry 2010 3 4 23 Crystal structure of the ligand-bound glucagon-like peptide-1 receptor extracellular domain. (PMID: 18287102) Runge S ... Rudolph R The Journal of biological chemistry 2008 3 4 23 Five missense mutations in glucagon-like peptide 1 receptor gene in Japanese population. (PMID: 15364163) Tokuyama Y ... Kanatsuka A Diabetes research and clinical practice 2004 3 23 41 Cloning and characterization of the 5' flanking sequences (promoter region) of the human GLP-1 receptor gene. (PMID: 9213353) Lankat-Buttgereit B ... Göke B Peptides 1997 3 4 23 Signal transduction of the GLP-1-receptor cloned from a human insulinoma. (PMID: 7517895) van Eyll B ... Göke B FEBS letters 1994

GLUD2: Tapken D, Steffensen TB, Leth R, et al. The low binding affinity of D-serine at the ionotropic glutamate receptor GluD2 can be attributed to the hinge region. Scientific Reports. 2017;7:46145. doi:10.1038/srep46145.

GMDS: Xing Wei, Kun Zhang, Haifeng Qin, Jinlong Zhu, Qiaoxi Qin, Yang Yu, Hong Wang BMC Cancer. 2018; 18: 600. Published online 2018 May 29. doi: 10.1186/s12885-018-4524-1 PMCID: PMC5975429 Magdalena Carlberg, Maigun Edhborg, Lene Lindberg Am J Mens Health. 2018 Jul; 12(4): 720–729. Published online 2018 Jan 19. doi: 10.1177/1557988317749071 PMCID: PMC6131440 Genevieve D. E. Haliburton, Gabriel L. McKinsey, Katherine S. Pollard Neurogenetics. 2016; 17: 1–9. Published online 2015 Sep 17.

GNAI3: Guo S, Zhang Y, Zhou T, et al. Role of GATA binding protein 4 (GATA4) in the regulation of tooth development via GNAI3. Scientific Reports. 2017;7:1534. doi:10.1038/s41598-017-01689-1.

GOLM1: Li RM, Nai MM, Duan SJ, et al. Down-expression of GOLM1 enhances the chemo-sensitivity of cervical cancer to methotrexate through modulation of the MMP13/EMT axis. American Journal of Cancer Research. 2018;8(6):964-980.

GPC5: Siwei Wang, Mantang Qiu, Wenjia Xia, Youtao Xu, Qixing Mao, Jie Wang, Gaochao Dong, Lin Xu, Xin Yang, Rong Yin Oncotarget. 2016 Nov 29; 7(48): 79736–79746. Published online 2016 Oct 27. doi: 10.18632/oncotarget.12945 PMCID: PMC5346747 Lixia Guo, Jingyu Wang, Ting Zhang, Yanan Yang Biochem Biophys Rep. 2016 Jul; 6: 108–112. Published online 2016 Mar 21. doi: 10.1016/j.bbrep.2016.03.010 PMCID: PMC4832925 Alexander G. Bassuk, Lakshmi B. Muthuswamy, Riley Boland, Tiffany L. Smith, Alissa M. Huls

GPHN: Dejanovic B, Djémié T, Grünewald N, et al. Simultaneous impairment of neuronal and metabolic function of mutated gephyrin in a patient with epileptic encephalopathy. EMBO Molecular Medicine. 2015;7(12):1580-1594. doi:10.15252/emmm.201505323.

GPX1: Gan X, Chen B, Shen Z, et al. High GPX1 expression promotes esophageal squamous cell carcinoma invasion, migration, proliferation and cisplatin-resistance but can be reduced by vitamin D. International Journal of Clinical and Experimental Medicine. 2014;7

GPX4: Rohr-Udilova N, Bauer E, Timelthaler G, et al. Impact of glutathione peroxidase 4 on cell proliferation, angiogenesis and cytokine production in hepatocellular carcinoma. Oncotarget. 2018;9(11):10054-10068. doi:10.18632/oncotarget.24300.

GRB14: Structural and functional studies of the Ras-associating and pleckstrin-homology domains of Grb10 and Grb14. (PMID: 19648926) Depetris RS ... Hubbard SR Nature structural & molecular biology 2009 3 4 23 Structural basis for inhibition of the insulin receptor by the adaptor protein Grb14. (PMID: 16246733) Depetris RS ... Hubbard SR Molecular cell 2005 3 4 23 The adaptor protein Grb14 regulates the localization of 3-phosphoinositide-dependent kinase-1. (PMID: 15210700) King CC ... Newton AC The Journal of biological chemistry 2004 3 4 23 Genome-wide association study in individuals of South Asian ancestry identifies six new type 2 diabetes susceptibility loci. (PMID: 21874001) Kooner JS ... Chambers JC Nature genetics 2011 3 41 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE ... Uhl GR Molecular medicine (Cambridge, Mass.) 2010

GRIA3: Wei C-H, Wu G, Cai Q, et al. MicroRNA-330-3p promotes cell invasion and metastasis in non-small cell lung cancer through GRIA3 by activating MAPK/ERK signaling pathway. Journal of Hematology & Oncology. 2017;10:125. doi:10.1186/s13045-017-0493-0.

Name Sample

Age

Gender

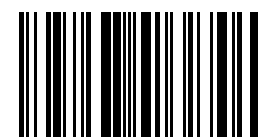
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

GRK3: Chromosome mapping of the human arrestin (SAG), beta-arrestin 2 (ARRB2), and beta-adrenergic receptor kinase 2 (ADRBK2) genes. (PMID: 7695743) Calabrese G ... De Blasi A Genomics 1994 2 3 21 Molecular cloning, functional expression and mRNA analysis of human beta-adrenergic receptor kinase 2. (PMID: 8427589) Parruti G ... De Blasi A Biochemical and biophysical research communications 1993 3 4 21 Allele specific analysis of the ADRBK2 gene in lymphoblastoid cells from bipolar disorder patients. (PMID: 19766236) McCarthy MJ ... Turner EE Journal of psychiatric research 2010 3 21 beta-Adrenoceptor and GRK3 expression in human lymphocytes is related to blood pressure and urinary albumin excretion. (PMID: 20216086) Oliver E ... D'Ocon P Journal of hypertension 2010 3 21 Leukocyte analysis from WHIM syndrome patients reveals a pivotal role for GRK3 in CXCR4 signaling. (PMID: 18274673) Balabanian K ... Bachelier F The Journal of clinical investigation 2008 Dual proteome-scale networks reveal cell-specific remodeling of the human interactome. (PMID: 33961781) Huttlin EL ... Gygi SP Cell 2021

GRK4: G protein-coupled receptor kinase 4 (GRK4) regulates the phosphorylation and function of the dopamine D3 receptor. (PMID: 19520868) Villar VA ... Jose PA The Journal of biological chemistry 2009 3 4 22 Blood pressure and renal sodium handling in relation to genetic variation in the DRD1 promoter and GRK4. (PMID: 18413491) Staessen JA ... Brand E Hypertension (Dallas, Tex. : 1979) 2008 3 22 40 Association study of G protein-coupled receptor kinase 4 gene variants with essential hypertension in northern Han Chinese. (PMID: 17044852) Wang Y ... Gu D Annals of human genetics 2006 3 22 40 The G protein-coupled receptor kinase 4 gene affects blood pressure in young normotensive twins. (PMID: 16461192) Zhu H ... Dong Y American journal of hypertension 2006 3 22 40 Association of G-protein-coupled receptor kinase 4 haplotypes, but not HSD3B1 or PTP1B polymorphisms, with essential hypertension. (PMID: 15097232) Speirs HJ ... Morris BJ Journal of hypertension 2004

GRK5: Hua Xu, Xiaoshan Jiang, Ke Shen, Christopher C. Fischer, Philip B. Wedegaertner Mol Biol Cell. 2014 Jul 1; 25(13): 2105–2115. doi: 10.1091/mbc.E13-09-0547PMCID: PMC4072583 Konstantin E. Komolov, Anshul Bhardwaj, Jeffrey L. Benovic J Biol Chem. 2015 Aug 21; 290(34): 20629–20647. Published online 2015 Jun 1. doi: 10.1074/jbc.M115.647297PMCID: PMC4543624 Konstantin E. Komolov, Yang Du, Nguyen Minh Duc, Robin M. Betz, João P. G. L. M. Rodrigues, Ryan D. Leib, Dhabaleswar Patra, Georgios Skiniotis

GRN: Arrant AE, Onyilo VC, Unger DE, Roberson ED. Progranulin Gene Therapy Improves Lysosomal Dysfunction and Microglial Pathology Associated with Frontotemporal Dementia and Neuronal Ceroid Lipofuscinosis. The Journal of Neuroscience. 2018;38(9):2341-2358. doi:10.1523/JNEUROSCI.18289-2017.2018

GSG1L: Mao X, Gu X, Lu W. GSG1L regulates the strength of AMPA receptor-mediated synaptic transmission but not AMPA receptor kinetics in hippocampal dentate granule neurons. Journal of Neurophysiology. 2017;117(1):28-35. doi:10.1152/jn.00307.2016.

GSR: Chul Han, Mi-Jung Kim, Dalian Ding, Hyo-Jin Park, Karessa White, Logan Walker, Tongjun Gu, Masaru Tanokura, Tatsuya Yamasoba, Paul Linser, Richard Salvi, Shinichi Someya PLoS One. 2017; 12(7): e0180817. Published online 2017 Jul 7. doi: 10.1371/journal.pone.0180817PMCID: PMC5501606 Kai Lüersen, Dirk Stegehake, Jens Daniel, Mike Drescher, Irene Ajonina, Caroline Ajonina, Patrick Hertel, Christian Woltersdorf, Eva Liebau PLoS One. 2013; 8(4): e60731. Published online 2013 Apr 8. doi: 10.1371/journal.pone.0060731

GSS: Igor P. Ostorbin, Ekaterina A. Belousova, Ulyana A. Boyarskikh, Aleksandr I. Zakabunin, Evgeny A. Khrapov, Maksim L. Filipenko Nucleic Acids Res. 2017 Sep 19; 45(16): 9595–9610. Published online 2017 Jul 26. doi: 10.1093/nar/gkx645PMCID: PMC5766155 Zhaojun Wang, Yiwen Li, Yushuang Yang, Xin Liu, Huanju Qin, Zhenying Dong, Shuhai Zheng, Kunpu Zhang, Daowen Wang Sci Rep. 2017; 7: 3428. Published online 2017 Jun 13. doi: 10.1038/s41598-017-03393-6PMCID: PMC5469833 Saioa R. Elezgarai, Natalia Ferná

GSTM1: Yuan X-P, Liu L-S, Chen C-B, et al. MicroRNA-423-5p facilitates hypoxia/reoxygenation-induced apoptosis in renal proximal tubular epithelial cells by targeting GSTM1 via endoplasmic reticulum stress. Oncotarget. 2017;8(47):82064-82077. doi:10.18632/oncotarget.18289.

GSTP1: Harshbarger W, Gondi S, Ficarro SB, et al. Structural and Biochemical Analyses Reveal the Mechanism of Glutathione S-Transferase Pi 1 Inhibition by the Anti-cancer Compound Piperlongumine. The Journal of Biological Chemistry. 2017;292(1):112-120. doi:10.1074/jbc.M116.006000

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



GTF2I: Variation in the Williams syndrome GTF2I gene and anxiety proneness interactively affect prefrontal cortical response to aversive stimuli M Jabbi, Q Chen, N Turner, P Kohn, M White, J S Kippenhan, D Dickinson, B Kolachana, V Mattay, D R Weinberger & K F Berman Genetic Risk Variants for Social Anxiety Murray B. Stein, MD, MPH,1,2,3 Chia-Yen Chen, ScD,4,5 Sonia Jain, PhD,2 Kevin P. Jensen, PhD,6,7 Feng He, MS,2 Steven G. Heeringa, PhD,8 Ronald C. Kessler, PhD,9 Adam Maihofer, MS,1 Matthew K.

GUZY1A3: Kessler T, Wobst J, Wolf B, et al. Functional characterization of the GUZY1A3coronary artery disease risk locus. Circulation. 2017;136(5):476-489. doi:10.1161/CIRCULATIONAHA.116.024152.

GUZY1B2: Assignment of GUZY1B2, the gene coding for the beta2 subunit of human guanylyl cyclase to chromosomal band 13q14.3 between markers D13S168 and D13S155. (PMID: 9889008) Behrends S ... Eiberg H Genomics 1999 2 3 4 A genome-wide association study of bipolar disorder in Norwegian individuals, followed by replication in Icelandic sample. (PMID: 20451256) Djurovic S ... Andreassen OA Journal of affective disorders 2010 3 41 The beta(2) subunit of soluble guanylyl cyclase contains a human-specific frameshift and is expressed in gastric carcinoma. (PMID: 10777682) Behrends S ... Vehse K Biochemical and biophysical research communications 2000 3 4 Assignment of GUZY1B2, the human homologue of a candidate gene for hypertension, to chromosome bands 13q14.2-->q14.3 by in situ hybridization. (PMID: 10449911) Malterer A ... Danziger RS Cytogenetics and cell genetics 1999 2 3 Gain of Additional BIRC3 Protein Functions through 3'-UTR-Mediated Protein Complex Formation. (PMID: 30948266) Lee SH ... Mayr C Molecular cell 2019 3

GYS2: The midbody interactome reveals unexpected roles for PP1 phosphatases in cytokinesis. (PMID: 31586073) Capalbo L ... D'Avino PP Nature communications 2019 3 A GYS2/p53 Negative Feedback Loop Restricts Tumor Growth in HBV-Related Hepatocellular Carcinoma. (PMID: 30584071) Chen SL ... Yun JP Cancer research 2019 Mutations in the liver glycogen synthase gene in children with hypoglycemia due to glycogen storage disease type 0. (PMID: 9691087) Orho M ... Groop LC The Journal of clinical investigation 1998 3 4 21 70 Primary structure of human liver glycogen synthase deduced by cDNA cloning. (PMID: 8203908) Nuttall FQ ... Lee EY Archives of biochemistry and biophysics 1994 3 4 21 The variable clinical phenotype of three patients with hepatic glycogen synthase deficiency. (PMID: 28245189) Kasapkara ÇS ... Ceylaner S Journal of pediatric endocrinology & metabolism : JPEM 2017 3 70 A novel mutation in the glycogen synthase 2 gene in a child with glycogen storage disease type 0. (PMID: 20051115) Soggia AP ... Pereira MA BMC medical genetics 2010 21 70 Investigation of genetic susceptibility factors for human longevity - a targeted nonsynonymous SNP study. (PMID: 20800603) Flachsbart F ... Nebel A Mutation research 2010

HABP2: Stavenuiter F, Ebberink EHTM, Mertens K, Meijer AB. Role of glycine 221 in catalytic activity of hyaluronan-binding protein 2. The Journal of Biological Chemistry. 2017;292(15):6381-6388. doi:10.1074/jbc.M116.757849.

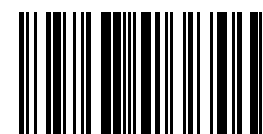
HBA1: AbdulAzeez S, Borgio JF. In-Silico Computing of the Most Deleterious nsSNPs in HBA1 Gene. Zhang Y, ed. PLoS ONE. 2016;11(1):e0147702. doi:10.1371/journal.pone.0147702.

HBB: Cai L, Bai H, Mahairaki V, et al. A Universal Approach to Correct Various HBBGene Mutations in Human Stem Cells for Gene Therapy of Beta-Thalassemia and Sickle Cell Disease. Stem Cells Translational Medicine. 2018;7(1):87-97. doi:10.1002/sctm.17-0066.

HCG17: Zhang G, Sun H, Zhang Y, et al. Characterization of dysregulated lncRNA-mRNA network based on ceRNA hypothesis to reveal the occurrence and recurrence of myocardial infarction. Cell Death Discovery. 2018;4:35. doi:10.1038/s41420-018-0036-7.

HCG9: Mrinal Pal, Sasha Ebrahimi, Gabriel Oh, Tarang Khare, Aiping Zhang, Zachary A. Kaminsky, Sun-Chong Wang, Arturas PetronisSchizophr Bull. 2016 Jan; 42(1): 170-177. Published online 2015 Jun 15. doi: 10.1093/schbul/sbv079PMCID: PMC4681545 Mu-Yun Wu, Shu-Jing Huang, Fan Yang, Xin-Tian Qin, Dong Liu, Ying Ding, Shu Yang, Xi-Cheng Wang Oncotarget. 2017 Aug 8; 8(32): 52708-52723. Published online 2017 Apr 13. doi: 10.18632/oncotarget.17085 PMCID: PMC5581063 Kevin Y. Urayama, Ruth F. Jarrett. Geno

HDAC4: Three proteins define a class of human histone deacetylases related to yeast Hda1p. (PMID: 10220385) Grozinger CM . Schreiber SL Proceedings of the National Academy of Sciences of the United States of America 1999 2 3 4 23 58 Haploinsufficiency of HDAC4 causes brachydactyly mental retardation syndrome, with brachydactyly type E, developmental delays, and behavioral problems. (PMID: 20691407) Williams SR . Elsea SH American journal of human genetics 2010 2 3 4 58 Involvement of histone deace



HDAC9: Smita Salian-Mehta, Mei Xu, Timothy A. McKinsey, Stuart Tobet, Margaret E. WiermanJ Biol Chem. 2015 May 29; 290(22): 14045–14056. Published online 2015 Apr 14. doi: 10.1074/jbc.M115.640482PMCID: PMC4447976 Christian L. Lino Cardenas, Chase W. Kessinger, Yisha Cheng, Carolyn MacDonald, Thomas MacGillivray, Brian Ghoshhajra, Luai Huleihel, Saifar Nuri, Ashish S. Yeri, Farouc A. Jaffer, Naftali Kaminski, Patrick Ellinor, Neal L. Weintraub, Rajeev Malhotra, Eric M. Isselbacher, Mark E. Lindsay

HER2: Charlotte KY Ng, Luciano G Martelotto, Arnaud Gauthier, Huei-Chi Wen, Salvatore Piscuoglio, Raymond S Lim, Catherine F Cowell, Paul M Wilkerson, Patty Wai, Daniel N Rodrigues, Laurent Arnould, Felipe C Geyer, Silvio E Bromberg, Magali Lacroix-Triki, Frederique Penault-Llorca, Sylvia Giard, Xavier Sastre-Garau, Rachael Natrajan, Larry Norton, Paul H Cottu, Britta Weigelt, Anne Vincent-Salomon, Jorge S Reis-FilhoGenome Biol. 2015; 16(1): 107. Published online 2015 May 22. doi: 10.1186/s13059-

HERC2: Monica Cubillos-Rojas, Taiane Schneider, Ouadah Hadjebi, Leonardo Pedrazza, Jarbas Rodrigues de Oliveira, Francina Langa, Jean-Louis Guénet, Joan Duran, Josep Maria de Anta, Soledad Alcántara, Rocio Ruiz, Eva María Pérez-Villegas, Francisco J. Aguilar, Ángel M. Carrión, Jose Angel Armengol, Emma Baple, Andrew H. Crosby, Ramon Bartrons, Francesc Ventura, Jose Luis Rosa Oncotarget. 2016 Aug 30; 7(35): 56083–56106. Published online 2016 Aug 12. doi: 10.18632/oncotarget.11270PMCID: PMC5302898

HES1: Liu X-J, Yang B, Huang S-N, et al. Human cytomegalovirus IE1 downregulates Hes1 in neural progenitor cells as a potential E3 ubiquitin ligase. Murphy EA, ed. PLoS Pathogens. 2017;13(7):e1006542. doi:10.1371/journal.ppat.1006542.

HFE: Lee SY, Zhu J, Salzberg AC, et al. Analysis of single nucleotide variants of HFE gene and association to survival in The Cancer Genome Atlas GBM data. Langevin SM, ed. PLoS ONE. 2017;12(3):e0174778. doi:10.1371/journal.pone.0174778.

HHEX: Gauthier S, Villaseñor A, Strlic B, et al. HHEX is a transcriptional regulator of the VEGFC/FLT4/PROX1 signaling axis during vascular development. Nature Communications. 2018;9:2704. doi:10.1038/s41467-018-05039-1.

HIF1A: Wu Y, Yun D, Zhao Y, et al. Down regulation of RNA binding motif, single-stranded interacting protein 3, along with up regulation of nuclear HIF1A correlates with poor prognosis in patients with gastric cancer. Oncotarget. 2017;8(1):1262-1277. doi:10.1863

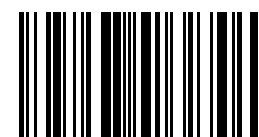
HIVEP2: Siddharth Srivastava, Hartmut Engels, Ina Schanze, Kirsten Cremer, Thomas Wieland, Moritz Menzel, Max Schubach, Saskia Biskup, Martina Kreiß, Sabine Ende, Tim M Strom, Dagmar Wieczorek, Martin Zenker, Siddharth Gupta, Julie Cohen, Alexander M Zink, Sakku Bai NaiduEur J Hum Genet. 2016 Apr; 24(4): 556–561. Published online 2015 Jul 8. doi: 10.1038/ejhg.2015.151PMCID: PMC4929870 Zeina Bash-Imam, Gabriel Thérizols, Anne Vincent, Florian Lafôrets, Micaela Polay Espinoza, Nathalie Pion.

HLA: Goeury T, Creary LE, Brunet L, et al. Deciphering the fine nucleotide diversity of full HLA class I and class II genes in a well-documented population from sub-Saharan Africa. Hla. 2018;91(1):36-51. doi:10.1111/tan.13180.

HLA-DPA1: Isotypic and allotypic variation of human class II histocompatibility antigen alpha-chain genes. (PMID: 6584734) Auffray C . Strominger JL Nature 1984 2 3 4 58 Identification of novel genetic markers associated with clinical phenotypes of systemic sclerosis through a genome-wide association strategy. (PMID: 21779181) Gorlova O . Martin J PLoS genetics 2011 3 45 58 Genome-wide association study identifies HLA-DP as a susceptibility gene for pediatric asthma in Asian populations. (PMID: 21814

HLA-DQA1: Liu B, Deng T, Zhu L, Zhong J. Association of human leukocyte antigen (HLA)-DQ and HLA-DQA1/DQB1 alleles with Vogt-Koyanagi-Harada disease: A systematic review and meta-analysis. Li. Y, ed. Medicine. 2018;97(7):e9914. doi:10.1097/MD.00000000000009914. A childhood acute lymphoblastic leukemia genome-wide association study identifies novel sex-specific risk variants Sandeep K. Singh, PhD,a,b Philip J. Lupo, PhD,c Michael E. Scheurer, PhD,d Anshul Saxena, MPH,e Amy E. Kennedy, PhD,f Boubakari I

HLA-DQB1: Jin P-P, Sun L-L, Ding B-J, et al. Human Leukocyte Antigen DQB1 (HLA-DQB1) Polymorphisms and the Risk for Guillain-Barré Syndrome: A Systematic Review and Meta-Analysis. Linker RA, ed. PLoS ONE. 2015;10(7):e0131374. doi:10.1371/journal.pone.0131374.



HLA-DRA: Sara Cajander, Elisabet Tina, Anders Bäckman, Anders Magnuson, Kristoffer Strålin, Bo Söderquist, Jan Källman PLoS One. 2016; 11(5): e0154690. Published online 2016 May 4. doi: 10.1371/journal.pone.0154690 PMID: PMC4856385 Martin Sebastian Winkler, Anne Rissiek, Marion Priefer, Edzard Schwedhelm, Linda Robbe, Antonia Bauer, Corinne Zahrte, Christian Zoellner, Stefan Kluge, Axel Nierhaus PLoS One. 2017; 12(8): e0182427. Published online 2017 Aug 3. doi: 10.1371/journal.pone.0182427

HLA-DRB1: Yi Tian Ting, Jan Petersen, Sri H. Ramarathinam, Stephen W. Scally, Khai L. Loh, Ranjeny Thomas, Anish Suri, Daniel G. Baker, Anthony W. Purcell, Hugh H. Reid, Jamie Rossjohn J Biol Chem. 2018 Mar 2; 293(9): 3236–3251. Published online 2018 Jan 9. doi: 10.1074/jbc.RA117.001013 PMID: PMC5836122 Lara Kular, Yun Liu, Sabrina Ruhrmann, Galina Zheleznyakova, Francesco Marabita, David Gomez-Cabrero, Tojo James, Ewoud Ewing, Magdalena Lindén, Bartosz Górnikiewicz, Shahin Aeinehband, Pernilla Stridh,

HMGR: Sam A Menzies, Norbert Volkmar, Dick JH van den Boomen, Richard T Timms, Anna S Dickson, James A Nathan, Paul J Lehnere Life. 2018; 7: e40009. Published online 2018 Dec 13. doi: 10.7554/eLife.40009 PMID: PMC6292692 Seonghwan Hwang, Isamu Z. Hartman, Leona N. Calhoun, Kristina Garland, Gennipher A. Young, Matthew A. Mitsche, Jeffrey McDonald, Fang Xu, Luke Engelking, Russell A. DeBose-Boyd J Biol Chem. 2016 Jun 24; 291(26): 13479–13494. Published online 2016 Apr 29. doi: 10.1074/jbc.M116.728469

HMMR: Chen H, Connell M, Mei L, Reid GSD, Maxwell CA. The nonmotor adaptor HMMR dampens Eg5-mediated forces to preserve the kinetics and integrity of chromosome segregation. Zhu X, ed. Molecular Biology of the Cell. 2018;29(7):786-796. doi:10.1091/mbc.E17-08-05

HNF1A: Luo Z, Li Y, Wang H, et al. Hepatocyte Nuclear Factor 1A (HNF1A) as a Possible Tumor Suppressor in Pancreatic Cancer. Trevino JG, ed. PLoS ONE. 2015;10(3):e0121082. doi:10.1371/journal.pone.0121082.

HNF1B: Two variants on chromosome 17 confer prostate cancer risk, and the one in TCF2 protects against type 2 diabetes. Gudmundsson J1, Sulem P, Steinthorsdottir V, Bergthorsson JT, Thorleifsson G, Manolescu A, Rafnar T, Gudbjartsson D, Agnarsson BA, Baker A, Sigurdsson A, Benediktsdottir KR, Jakobsdottir M, Blondal T, Stacey SN, Helgason A, Gunnarsdottir S, Olafsdottir A, Kristinsson KT, Birgisdottir B, Ghosh S, Thorlacius S, Magnusdottir D, Stefansdottir G, Kristjansson K, Bagger Y, Wilensky RL,

HNF4A: The diabetic phenotype in HNF4A mutation carriers is moderated by the expression of HNF4A isoforms from the P1 promoter during fetal development Harries LW, Locke JM, Shields B, Hanley NA, Hanley KP, Steele A, Njølstad PR, Ellard S, Hattersley AT Diabetes 2008 Jun;57(6):1745-52 The role of HNF4A variants in the risk of type 2 diabetes Mohlke KL, Boehnke M Curr Diab Rep 2005 Apr;5(2):149-56 Mutations in the hepatocyte nuclear factor-4alpha gene in maturity-onset diabetes of the young (MODY1

HSD11B1: Association study of 11beta-hydroxysteroid dehydrogenase type 1 gene polymorphisms and metabolic syndrome in urban Japanese cohort. (PMID: 19535162) Miyamoto Y . Morisaki T Diabetes research and clinical practice 2009 3 23 43 56 Regulatory effect of common promoter polymorphisms on the expression of the 11beta-hydroxysteroid dehydrogenase type 1 gene. (PMID: 19571556) Ku YH . Park KS Hormone research 2009 3 23 43 56 [Possible pathogenetic role of 11 beta-hydroxysteroid dehydrogenase type 1

HSPD1: Fang Y, Xie T, Xue N, et al. miR-382 Contributes to Renal Tubulointerstitial Fibrosis by Downregulating HSPD1. Oxidative Medicine and Cellular Longevity. 2017;2017:4708516. doi:10.1155/2017/4708516.

HSPE1: Tsai C-H, Chen Y-T, Chang Y-H, et al. Systematic verification of bladder cancer-associated tissue protein biomarker candidates in clinical urine specimens. Oncotarget. 2018;9(56):30731-30747. doi:10.18632/oncotarget.24578.

HTR1B: Guo J, Zhang W, Zhang L, et al. Probable involvement of p11 with interferon alpha induced depression. Scientific Reports. 2016;6:17029. doi:10.1038/srep17029.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



HTR2A: Polymorphisms in GRIK4, HTR2A, and FKBP5 show interactive effects in predicting remission to antidepressant treatment. (PMID: 19924111) Horstmann S . Binder EB Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology 2010 3 23 45 58 A genetic variant of HTR2C may play a role in the manifestation of Tourette syndrome. (PMID: 20010450) Dehning S . Zill P Psychiatric genetics 2010 3 23 45 58 Comorbidity between bipolar disorder and alcohol use disorder:

HTR2C: Yu W, Xu H, Xue Y, et al. 5-HT 2C R antagonist/5-HT 2C R inverse agonist recovered the increased isolation-induced aggressive behavior of BALB/c mice mediated by ADAR1 (p110) expression and Htr2c RNA editing. Brain and Behavior. 2018;8(3):e00929. doi:10.1

HTRA1: Ikawati M, Kawaichi M, Oka C. Loss of HtrA1 serine Proteinase induces synthetic modulation of aortic vascular smooth muscle cells. Bader M, ed. PLoS ONE. 2018;13(5):e0196628. doi:10.1371/journal.pone.0196628.

HYKK: Nedeljkovic I, Carnero-Montoro E, Lahousse L, et al. Understanding the role of the chromosome 15q25.1 in COPD through epigenetics and transcriptomics. European Journal of Human Genetics. 2018;26(5):709-722. doi:10.1038/s41431-017-0089-8.

ICAM1: Salvador AM, Nevers T, Velázquez F, et al. Intercellular Adhesion Molecule 1 Regulates Left Ventricular Leukocyte Infiltration, Cardiac Remodeling, and Function in Pressure Overload–Induced Heart Failure. Journal of the American Heart Association: Cardio

ICAM3: Li-Yang Li, Hao-Ru Zhang, Zhi-Long Jiang, Yan-Zhong Chang, Chang-Zhou ShaoChin Med J (Engl) 2018 Nov 5; 131(21): 2575–2582. doi: 10.4103/0366-6999.244103PMCID: PMC6213851 Coraline Chéneau, Flora Coulon, Vanessa Porkolab, Franck Fieschi, Stéphanie Laurant, Diane Razanajaona-Doll, Jean-Jacques Pin, Eva Maria Borst, Martin Messerle, Céline Bressollette-Bodin, Franck Halary Infect Dis. 2018 Aug 1; 218(3): 490–503. Published online 2018 Apr 10.

IDE: Zhang Z, Liang WG, Bailey LJ, et al. Ensemble cryoEM elucidates the mechanism of insulin capture and degradation by human insulin degrading enzyme. Subramaniam S, ed. eLife. 2018;7:e33572. doi:10.7554/eLife.33572.

IFI16: Iqbal J, Ansari MA, Kumar B, et al. Histone H2B-IFI16 Recognition of Nuclear Herpesviral Genome Induces Cytoplasmic Interferon-? Responses. Moses AV, ed. PLoS Pathogens. 2016;12(10):e1005967. doi:10.1371/journal.ppat.1005967.

IFIH1: Asgari S, Schlapbach LJ, Anchisi S, et al. Severe viral respiratory infections in children with IFIH1 loss-of-function mutations. Proceedings of the National Academy of Sciences of the United States of America. 2017;114(31):8342-8347. doi:10.1073/pnas.170

IFNGR2: Zhou H, Chen S, Qi Y, et al. Identification of Type II Interferon Receptors in Geese: Gene Structure, Phylogenetic Analysis, and Expression Patterns. BioMed Research International. 2015;2015:537637. doi:10.1155/2015/537637.

IFNL4: A variant upstream of IFNL3 (IL28B) creating a new interferon gene IFNL4 is associated with impaired clearance of hepatitis C virus. (PMID: 23291588) Prokunina-Olsson L . O'Brien TR Nature genetics 2013 2 3 4 56 Role of Functional IFNL4, IFNLR1, IFNA, IFNAR2 Polymorphisms in Hepatitis B virus-related liver disease in Han Chinese population. (PMID: 29080269) Ma N . Liu D Journal of viral hepatitis 2018 3 56 Interferon-?3/4 genetic variants and interferon-?3 serum levels are biomarkers of lup

IGF1R: Lee H-T, Chang H-T, Lee S, et al. Role of IGF1R+ MSCs in modulating neuroplasticity via CXCR4 cross-interaction. Scientific Reports. 2016;6:32595. doi:10.1038/srep32595.

IGF2: Schagdarsurengin U, Lammert A, Schunk N, et al. Impairment of IGF2 gene expression in prostate cancer is triggered by epigenetic dysregulation of IGF2-DMR0 and its interaction with KLF4. Cell Communication and Signaling : CCS. 2017;15:40. doi:10.1186/s12964-017-0197-7.

IGF2BP2: Wu L, Song W, Xie Y, et al. miR-181a-5p suppresses invasion and migration of HTR-8/SVneo cells by directly targeting IGF2BP2. Cell Death & Disease. 2018;9(2):16. doi:10.1038/s41419-017-0045-0.



IKZF4: Si-Qi Liu, Shan Jiang, Chaoran Li, Baojun Zhang, Qi-Jing Li J Biol Chem. 2014 May 2; 289(18): 12446–12456. Published online 2014 Mar 18. doi: 10.1074/jbc.M114.550723PMCID: PMC4007439 Qianxia Zhang, Maria Chikina, Andrea L. Szymczak-Workman, William Horne, Jay K. Kolls, Kate M. Vignali, Daniel Normolle, Maria Bettini, Creg J. Workman, Dario A.A. Vignali Sci Immunol. Author manuscript; available in PMC 2017 Sep 22. Published in final edited form as: Sci Immunol. 2017 Mar 31.

IL-10: Guillot-Sestier M-V, Doty KR, Gate D, et al. IL10 deficiency re-balances innate immunity to mitigate Alzheimer-like pathology. Neuron. 2015;85(3):534-548. doi:10.1016/j.neuron.2014.12.068.

IL-15: Yue Liu, Yanlan Wang, Jieyu Xing, Yumei Li, Jiayu Liu, Zhong Wang Drug Des Devel Ther. 2018; 12: 2645–2654. Published online 2018 Aug 29. doi: 10.2147/DDDT.S166373PMCID: PMC6120566 Julia K. Polansky, Rajia Bahri, Mylene Divivier, Erwin H. Duitman, Christina Vock, Diego A. Goyeneche-Patino, Zane Orinska, Silvia Bulfone-Paus Sci Rep. 2016; 6: 19699. Published online 2016 Jan 29. doi: 10.1038/srep19699PMCID: PMC4731790 Vesna Tomic, Diana L. Thomas, David M. Kranz, Jia Liu, Grant McFadden, Joanna L

IL-18RAP: Martínez-Barquero V, de Marco G, Martínez-Hervas S, et al. Are IL18RAP gene polymorphisms associated with body mass regulation? A cross-sectional study. BMJ Open. 2017;7(11):e017875. doi:10.1136/bmjopen-2017-017875.

IL-1A: Su H, Rei N, Zhang L, Cheng J. Meta-analyses of IL1A polymorphisms and the risk of several autoimmune diseases published in databases. Ahuja SK, ed. PLoS ONE. 2018;13(6):e0198693. doi:10.1371/journal.pone.0198693.

IL-1B: Hasegawa T, Hall CJ, Crosier PS, et al. Transient inflammatory response mediated by interleukin-1 β is required for proper regeneration in zebrafish fin fold. Stainier DY, ed. eLife. 2017;6:e22716. doi:10.7554/eLife.22716.

IL-1RN: Rogier R, Ederveen THA, Boekhorst J, et al. Aberrant intestinal microbiota due to IL-1 receptor antagonist deficiency promotes IL-17- and TLR4-dependent arthritis. Microbiome. 2017;5:63. doi:10.1186/s40168-017-0278-2.

IL-2RA: Li L, Yang S-H, Yao Y, et al. Block of both TGF- β and IL-2 signaling impedes Neurophilin-1+ regulatory T cell and follicular regulatory T cell development. Cell Death & Disease. 2016;7(10):e2439-. doi:10.1038/cddis.2016.348.

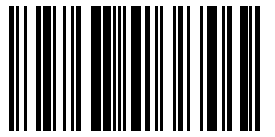
IL-2RB: Vallese D, Negroni E, Duguez S, et al. The Rag2-IL2rb-Dmd- Mouse: a Novel Dystrophic and Immunodeficient Model to Assess Innovating Therapeutic Strategies for Muscular Dystrophies. Molecular Therapy. 2013;21(10):1950-1957. doi:10.1038/mt.2013.186.

IL-4: Hühner L, Rilka J, Gilsbach R, Zhou X, Machado V, Spittau B. Interleukin-4 Protects Dopaminergic Neurons In vitro but Is Dispensable for MPTP-Induced Neurodegeneration In vivo. Frontiers in Molecular Neuroscience. 2017;10:62. doi:10.3389/fnmol.2017.00062.

IL-6: Huang Q, Zhang Z, Liao Y, et al. 17 β -estradiol upregulates IL6 expression through the ER, pathway to promote lung adenocarcinoma progression. Journal of Experimental & Clinical Cancer Research?: CR. 2018;37:133. doi:10.1186/s13046-018-0804-5.

IL-7R: Gaddiel Galarza-Muñoz, Farren B.S. Briggs, Irina Evsyukova, Geraldine Schott-Lerner, Edward M. Kennedy, Tinashe Nyanhete, Liuyang Wang, Laura Bergamaschi, Steven G. Widen, Georgia D. Tomaras, Dennis C. Ko, Shelton S. Bradrick, Lisa F. Barcellos, Simon G. Gregory, Mariano A. Garcia-Blanco Cell. Author manuscript; available in PMC 2018 Mar 23. Published in final edited form as: Cell. 2017 Mar 23; 169(1): 72–84.e13. doi: 10.1016/j.cell.2017.03.007PMCID: PMC5456452 Shijiao Cai, Yang Chen, Yue Sha

IL21-AS1: Early-onset inflammatory bowel disease and common variable immunodeficiency-like disease caused by IL-21 deficiency. (PMID: 24746753) Salzer E ... Boztug K The Journal of allergy and clinical immunology 2014 70 Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. (PMID: 12477932) Strausberg RL ... Mammalian Gene Collection Program Team Proceedings of the National Academy of Sciences of the United States of America 2002 3



IL4R: The polymorphisms S503P and Q576R in the interleukin-4 receptor alpha gene are associated with atopy and influence the signal transduction. (PMID: 10233717) Kruse S ... Deichmann KA Immunology 1999 3 4 21 39 70 The association of atopy with a gain-of-function mutation in the alpha subunit of the interleukin-4 receptor. (PMID: 9392697) Hershey GK ... Chatila TA The New England journal of medicine 1997 3 4 21 39 70 Effects of common atopy-associated amino acid substitutions in the IL-4 receptor alpha chain on IL-4 induced phenotypes. (PMID: 15712015) Franjkovic I ... Bein G Immunogenetics 2005 3 21 39 70 Interleukin-4/interleukin-4 receptor gene polymorphisms in hand osteoarthritis. (PMID: 20219689) Vargiolu M ... Meliconi R Osteoarthritis and cartilage 2010 3 21 39 Cytokine polymorphisms and Alzheimer disease: possible associations. (PMID: 20213229) Ribizzi G ... Megna M Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology 2010 Interleukin-4/interleukin-4 receptor gene polymorphisms in hand osteoarthritis. (PMID: 20219689) Vargiolu M ... Meliconi R Osteoarthritis and cartilage 2010 3 21 39 Cytokine polymorphisms and Alzheimer disease: possible associations. (PMID: 20213229) Ribizzi G ... Megna M Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology 2010 3 21 39 Involvement of IL-4, IL-13 and Their Receptors in Pancreatic Cancer. (PMID: 33804263) Shi J ... Kornmann M International journal of molecular sciences 2021 3 Detection of association of IL1 β , IL4R, and IL6 gene polymorphisms with cervical cancer in the Bangladeshi women by tetra-primer ARMS-PCR method. (PMID: 33187912) Muhammad SB ... Safiqul Islam M International immunopharmacology 2021 3 IL4RA gene expression in relation to I50V, Q551R and C-3223T polymorphisms. (PMID: 33529503) Danielewicz H ... Boznański A Advances in clinical and experimental medicine : official organ Wroclaw Medical University 2021

INS: Chen Q, Niu X, Zuo L, et al. A Railway Track Geometry Measuring Trolley System Based on Aided INS. Sensors (Basel, Switzerland). 2018;18(2):538. doi:10.3390/s18020538.

INSIG2: Prakash J, Mittal B, Srivastava A, Awasthi S, Srivastava P, Srivastava N. Common Genetic Variant of INSIG2 Gene rs7566605 Polymorphism Is Associated with Severe Obesity in North India. Iranian Biomedical Journal. 2017;21(4):261-269. doi:10.18869/acadpub.i

INTERGENIC: Tsai C-H, Liao R, Chou B, Palumbo M, Contreras LM. Genome-Wide Analyses in Bacteria Show Small-RNA Enrichment for Long and Conserved Intergenic Regions. Zhulin IB, ed. Journal of Bacteriology. 2015;197(1):40-50. doi:10.1128/JB.02359-14.

IRF4: Guérin A, Kerner G, Marr N, et al. IRF4 haploinsufficiency in a family with Whipple's disease. van der Meer JW, ed. eLife. 2018;7:e32340. doi:10.7554/eLife.32340.

IRF5: De S, Zhang B, Shih T, et al. B Cell-Intrinsic Role for IRF5 in TLR9/BCR-Induced Human B Cell Activation, Proliferation, and Plasmablast Differentiation. Frontiers in Immunology. 2017;8:1938. doi:10.3389/fimmu.2017.01938.

IRS1: Insulin receptor substrate 1 gene variation modifies insulin resistance response to weight-loss diets in a 2-year randomized trial: the Preventing Overweight Using Novel Dietary Strategies (POUNDS LOST) trial. Qi Q1, Bray GA, Smith SR, Hu FB, Sacks FM, Qi L.

IRS2: Complex haplotypes of IRS2 gene are associated with severe obesity and reveal heterogeneity in the effect of Gly1057Asp mutation. (PMID: 12687350) Lautier C ... Grigorescu F Human genetics 2003 3 4 23 41 54 The IRS2 Gly1057Asp variant is associated with human longevity. (PMID: 19887537) Barbieri M ... Paolisso G The journals of gerontology. Series A, Biological sciences and medical sciences 2010 3 23 41 54 Insulin receptor substrate-2 gene polymorphism: is it associated with endometrial cancer? (PMID: 20184486) Cayan F ... Dilek S Gynecological endocrinology : the official journal of the International Society of Gynecological Endocrinology 2010 3 23 41 54 Association of the FTO gene with obesity and the metabolic syndrome is independent of the IRS-2 gene in the female population of Southern France. (PMID: 19818665) Attaoua R ... Grigorescu F Diabetes & metabolism 2009 3 23 41 54 The G1057D polymorphism of IRS-2 gene is not associated with type 2 diabetes and obese patients among ethnic groups in Tunisian population. (PMID: 19332049) Ouederni TB ... Benammar-Elgaaied A Clinical biochemistry 2009

ITGA11: Ruchi Bansal, Shigeki Nakagawa, Saleh Yazdani, Joop van Baarlen, Anu Venkatesh, Anna P Koh, Won-Min Song, Nicolas Goossens, Hideo Watanabe, Mary B Beasley, Charles A Powell, Gert Storm, Naftali Kaminski, Harry van Goor, Scott L Friedman, Yujin Hoshida, Jai Prakash Exp Mol Med. 2017 Nov; 49(11): e396. Published online 2017 Nov 17. doi: 10.1038/emm.2017.213PMCID: PMC5704196 Vincent Grassot, Anne Da Silva, James Saliba, Abderrahman Maftah, Fabrice Dupuy, Jean-Michel Petit BMC Genomics.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



ITGA2: Chuang Y-C, Wu H-Y, Lin Y-L, et al. Blockade of ITGA2 Induces Apoptosis and Inhibits Cell Migration in Gastric Cancer. *Biological Procedures Online*. 2018;20:10. doi:10.1186/s12575-018-0073-x.

ITGA6: Jin Y-P, Hu Y-P, Wu X-S, et al. miR-143-3p targeting of ITGA6 suppresses tumour growth and angiogenesis by downregulating PLGF expression via the PI3K/AKT pathway in gallbladder carcinoma. *Cell Death & Disease*. 2018;9(2):182. doi:10.1038/s41419-017-0258-2

ITGAV: Ding Y, Pan Y, Liu S, Jiang F, Jiao J. Elevation of MiR-9-3p suppresses the epithelial-mesenchymal transition of nasopharyngeal carcinoma cells via down-regulating FN1, ITGB1 and ITGAV. *Cancer Biology & Therapy*. 2017;18(6):414-424. doi:10.1080/15384047.20

ITGB3: Nemlich Y, Baruch EN, Besser MJ, et al. ADAR1-mediated regulation of melanoma invasion. *Nature Communications*. 2018;9:2154. doi:10.1038/s41467-018-04600-2.

IYD: Ingavat N, Kavran JM, Sun Z, Rokita SE. Active Site Binding is not Sufficient for Reductive Deiodination by Iodotyrosine Deiodinase. *Biochemistry*. 2017;56(8):1130-1139. doi:10.1021/acs.biochem.6b01308.

JAG1: Stephania Macchiarulo, Bernice E. *MorrowBiol Open*. 2017 Oct 15; 6(10): 1472–1482. Published online 2017 Aug 24. doi: 10.1242/bio.027359PMCID: PMC5665468Marcia Bellon, Ramona Moles, Hassiba Chaib-Mezrag, Joanna Pancewicz, Christophe NicotJ *Hematol Oncol*. 2018; 11: 119. Published online 2018 Sep 19. doi: 10.1186/s13045-018-0665-6PMCID: PMC6146899 Wen-Hsin Chang, Bing-Ching Ho, Yi-Jing Hsiao, Jin-Shing Chen, Chien-Hung Yeh, Hsuan-Yu Chen, Gee-Chen Chang, Kang-Yi Su, Sung-Liang YuP *LoS One*. 2016

JAZF1: Sung Y, Park S, Park SJ, et al. Jazf1 promotes prostate cancer progression by activating JNK/Slug. *Oncotarget*. 2018;9(1):755-765. doi:10.18632/oncotarget.23146.

JDP2: Marc R. Mansour, Shuning He, Zhaodong Li, Riadh Lobbardi, Brian J. Abraham, Clemens Hug, Sunniyat Rahman, Theresa E. Leon, You-Yi Kuang, Mark W. Zimmerman, Traci Blonquist, Evisa Gjini, Alejandro Gutierrez, Qin Tang, Laura Garcia-Perez, Karin Pike-Overzet, Lars Anders, Alla Berezovskaya, Yi Zhou, Leonard I. Zon, Donna Neuberg, Adele K. Fielding, Frank J.T. Staal, David M. Langenau, Takaomi Sanda, Richard A. Young, A. Thomas LookJ *Exp Med*. 2018 Jul 2; 215(7): 1929–1945. doi: 10.1084/jem.2017

JMJD1C: A genome- and phenome-wide association study to identify genetic variants influencing platelet count and volume and their pleiotropic effects. Shameer K1, Denny JC, Ding K, Jouni H, Crosslin DR, de Andrade M, Chute CG, Peissig P, Pacheco JA, Li R, Bastarache L, Kho AN, Ritchie MD, Masys DR, Chisholm RL, Larson EB, McCarty CA, Roden DM, Jarvik GP, Kullo IJ.

KCNB1: Wei Y, Shin MR, Sesti F. Oxidation of KCNB1 channels in the human brain and in mouse model of Alzheimer’s disease. *Cell Death & Disease*. 2018;9(8):820. doi:10.1038/s41419-018-0886-1.

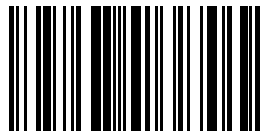
KCNE1: Barro-Soria R, Ramentol R, Liin SI, Perez ME, Kass RS, Larsson HP. KCNE1 and KCNE3 modulate KCNQ1 channels by affecting different gating transitions. *Proceedings of the National Academy of Sciences of the United States of America*. 2017;114(35):E7367-E7376

KCNE2: Hu Z, Crump SM, Zhang P, Abbott GW. Kcne2 deletion attenuates acute post-ischaemia/reperfusion myocardial infarction. *Cardiovascular Research*. 2016;110(2):227-237. doi:10.1093/cvr/cvw048.

KCNE3: Barro-Soria R, Ramentol R, Liin SI, Perez ME, Kass RS, Larsson HP. KCNE1 and KCNE3 modulate KCNQ1 channels by affecting different gating transitions. *Proceedings of the National Academy of Sciences of the United States of America*. 2017;114(35):E7367-E7376

KCNJ11: Zhang B, Novitskaya T, Wheeler DG, et al. Kcnj11 Ablation is Associated with Increased Nitro-Oxidative Stress During Ischemia-Reperfusion Injury: Implications for Human Ischemic Cardiomyopathy. *Circulation Heart failure*. 2017;10(2):e003523. doi:10.1161/CI





KCNMA1: Ma G, Liu H, Hua Q, et al. KCNMA1 cooperating with PTK2 is a novel tumor suppressor in gastric cancer and is associated with disease outcome. *Molecular Cancer*. 2017;16:46. doi:10.1186/s12943-017-0613-z.

KCNQ1: Barro-Soria R, Ramentol R, Liin SI, Perez ME, Kass RS, Larsson HP. KCNE1 and KCNE3 modulate KCNQ1 channels by affecting different gating transitions. *Proceedings of the National Academy of Sciences of the United States of America*. 2017;114(35):E7367-E7376

KIAA0319: Franquinho F, Nogueira-Rodrigues J, Duarte JM, et al. The Dyslexia-susceptibility Protein KIAA0319 Inhibits Axon Growth Through Smad2 Signaling. *Cerebral Cortex (New York, NY)*. 2017;27(3):1732-1747. doi:10.1093/cercor/bhx023.

KIAA1109: Gueneau L, Fish RJ, Shamseldin HE, et al. KIAA1109 Variants Are Associated with a Severe Disorder of Brain Development and Arthrogryposis. *American Journal of Human Genetics*. 2018;102(1):116-132. doi:10.1016/j.ajhg.2017.12.002. Consolidation of Evidence for Association of the KIAA1109-TENR-IL2-IL21 rs6822844 Variant With Crohn's Disease Jade Hollis-Moffatt;Richard Gearry;Murray Barclay;Tony Merriman;Rebecca Roberts;

KIAA1211: Zeltner N, Fattahi F, Dubois NC, et al. Capturing the biology of mild versus severe disease in a pluripotent stem cell-based model of familial Dysautonomia. *Nature medicine*. 2016;22(12):1421-1427. doi:10.1038/nm.4220.

KIF6: Angelini S, Rosticci M, Massimo G, et al. Relationship between Lipid Phenotypes, Overweight, Lipid Lowering Drug Response and KIF6 and HMG-CoA Genotypes in a Subset of the Brisighella Heart Study Population. *International Journal of Molecular Sciences*. 20

KIRREL: Zhang M-J, Hong Y-Y, Li N. Overexpression of Kin of IRRE-Like Protein 1 (KIRREL) in Gastric Cancer and Its Clinical Prognostic Significance. *Medical Science Monitor?: International Medical Journal of Experimental and Clinical Research*. 2018;24:2711-2719.

KL: Rangiani A, Cao Z, Sun Y, et al. Protective Roles of DMP1 in High Phosphate Homeostasis. Mohanraj R, ed. *PLoS ONE*. 2012;7(8):e42329. doi:10.1371/journal.pone.0042329.

KLC1: Chiba K, Chien K, Sobu Y, et al. Phosphorylation of KLC1 modifies interaction with JIP1 and abolishes the enhanced fast velocity of APP transport by kinesin-1. Kaibuchi K, ed. *Molecular Biology of the Cell*. 2017;28(26):3857-3869. doi:10.1091/mbc.E17-05-03

KLF6: Zhang Y, Lei C-Q, Hu Y-H, et al. Krüppel-like Factor 6 Is a Co-activator of NF- κ B That Mediates p65-dependent Transcription of Selected Downstream Genes. *The Journal of Biological Chemistry*. 2014;289(18):12876-12885. doi:10.1074/jbc.M113.535831.

KLF7: Wen-Yuan Li, Ying Wang, Feng-Guo Zhai, Ping Sun, Yong-Xia Cheng, Ling-Xiao Deng, Zhen-Yu Wang *Neural Plast*. 2017; 2017: 1621629. Published online 2017 Aug 13. doi: 10.1155/2017/1621629 PMCID: PMC5572611 Meixiu Zhang, Cuizhe Wang, Jinxiu Wu, Xiaodan Ha, Yuchun Deng, Xueting Zhang, Jingzhou Wang, Keru Chen, Jiale Feng, Jiaojiao Zhu, Jianxin Xie, Jun Zhang *Mediators Inflamm*. 2018; 2018: 1756494. Published online 2018 Nov 26. doi: 10.1155/2018/1756494 PMCID: PMC6287150 Laura G. Schuettpehlz, Priya K.

KLKB1: Genetic variants associated with deep vein thrombosis: the F11 locus. (PMID: 19583818) Li Y ... Rosendaal FR *Journal of thrombosis and haemostasis* : JTH 2009 3 23 41 54 Common variation in KLKB1 and essential hypertension risk: tagging-SNP haplotype analysis in a case-control study. (PMID: 17318641) Lu X ... Gu D *Human genetics* 2007 3 23 41 54 Genomic structure of the human plasma prekallikrein gene, identification of allelic variants, and analysis in end-stage renal disease. (PMID: 11031105) Yu H ... Bowden DW *Genomics* 2000 3 4 23 54 Identification of human plasma kallikrein gene polymorphisms and evaluation of their role in end-stage renal disease. (PMID: 9535413) Yu H ... Freedman BI *Hypertension (Dallas, Tex. : 1979)* 1998 2 3 23 54 Location of the disulfide bonds in human plasma prekallikrein: the presence of four novel apple domains in the amino-terminal portion of the molecule. (PMID: 1998666) McMullen BA ... Davie EW *Biochemistry* 1991

KLRB1: Rother S, Hundrieser J, Pokoyski C, et al. The c.503T>C Polymorphism in the Human KLRB1 Gene Alters Ligand Binding and Inhibitory Potential of CD161 Molecules. Vivier E, ed. *PLoS ONE*. 2015;10(8):e0135682. doi:10.1371/journal.pone.0135682.



LAG3: Andrews LP, Marciscano AE, Drake CG, Vignali DAA. LAG3 (CD223) as a Cancer Immunotherapy Target. Immunological reviews. 2017;276(1):80-96. doi:10.1111/imr.12519.

LDLR: Poirier S, Hamouda HA, Villeneuve L, Demers A, Mayer G. Trafficking Dynamics of PCSK9-Induced LDLR Degradation: Focus on Human PCSK9 Mutations and C-Terminal Domain. Kanzaki M, ed. PLoS ONE. 2016;11(6):e0157230. doi:10.1371/journal.pone.0157230.

LDLRAP1: Gabunia K, Herman A, Ray M, et al. Induction of MiR133a expression by IL-19 Targets LDLRAP1 and Reduces oxLDL Uptake in VSMC. Journal of molecular and cellular cardiology. 2017;105:38-48. doi:10.1016/j.yjmcc.2017.02.005.

LEP: Silva BJ de A, Barbosa MG de M, Andrade PR, et al. Autophagy Is an Innate Mechanism Associated with Leprosy Polarization. Salgame P, ed. PLoS Pathogens. 2017;13(1):e1006103. doi:10.1371/journal.ppat.1006103.

LEPR: Yang Y, Niu T. A meta-analysis of associations of LEPR Q223R and K109R polymorphisms with Type 2 diabetes risk. Amendola R, ed. PLoS ONE. 2018;13(1):e0189366. doi:10.1371/journal.pone.0189366.

LGALS17A: El-Diwany R, Soliman M, Sugawara S, et al. CMPK2 and BCL-G are associated with type 1 interferon-induced HIV restriction in humans. Science Advances. 2018;4(8):eaat0843. doi:10.1126/sciadv.aat0843.

LHPP: Polimanti R, Wang Q, Meda SA, et al. The Interplay Between Risky Sexual Behaviors and Alcohol Dependence: Genome-Wide Association and Neuroimaging Support for LHPP as a Risk Gene. Neuropsychopharmacology. 2017;42(3):598-605. doi:10.1038/npp.2016.153.

LINC00704: Lu W, Xu Y, Xu J, Wang Z, Ye G. Identification of differential expressed lncRNAs in human thyroid cancer by a genome-wide analyses. Cancer Medicine. 2018;7(8):3935-3944. doi:10.1002/cam4.1627.

LINC01299: Novel genetic loci identified for the pathophysiology of childhood obesity in the Hispanic population. (PMID: 23251661) Comuzzie AG ... Butte NF PloS one 2012 3 Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. (PMID: 16344560) Kimura K ... Sugano S Genome research 2006 3 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T ... Sugano S Nature genetics 2004

LINC01500: Tatsushi Okayama, Yasuyuki Hashiguchi, Hiroki Kikuyama, Hiroshi Yoneda, Tetsufumi KanazawaTransl Psychiatry. 2018; 8: 221. Published online 2018 Oct 15. doi: 10.1038/s41398-018-0272-xPMCID: PMC6189064

LIPA: Dong L, Feng R, Zhang L, et al. Prospective comparison of hybrid capture 2 and SPF10-LiPA for carcinogenic human papillomavirus detection and risk prediction of cervical cancer: a population-based cohort study in China. Journal of Gynecologic Oncology. 20

LIPC: Wang Y, Wang M, Zhang X, et al. The Association between LIPC rs493258 Polymorphism and the Susceptibility to Age-Related Macular Degeneration. Tchounwou PB, ed. International Journal of Environmental Research and Public Health. 2016;13(10):1022. doi:10.33

LIPF: Crystal structure of human gastric lipase and model of lysosomal acid lipase, two lipolytic enzymes of medical interest. (PMID: 10358049) Roussel A ... Cambillau C The Journal of biological chemistry 1999 3 4 21 The acid lipase gene family: three enzymes, one highly conserved gene structure. (PMID: 9186906) Lohse P ... Seidel D Journal of lipid research 1997 2 3 21 Stereoselectivity of lipases. II. Stereoselective hydrolysis of triglycerides by gastric and pancreatic lipases. (PMID: 2243091) Rogalska E ... Verger R The Journal of biological chemistry 1990 3 4 21 Molecular cloning of a human gastric lipase and expression of the enzyme in yeast. (PMID: 3304425) Bodmer MW ... Lowe PA Biochimica et biophysica acta 1987 2 3 4 Variation at the NFATC2 locus increases the risk of thiazolidinedione-induced edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) study. (PMID: 20628086) Bailey SD ... DREAM investigators Diabetes care 2010 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA Nature 2020

Name Sample

Age

Gender

F

Report date

12/09/2025

Prescriber

Health insurance



Sample

LIPG: Cloning of a unique lipase from endothelial cells extends the lipase gene family. (PMID: 10318835) Hirata K . Quertermous T The Journal of biological chemistry 1999 2 3 4 23 56 Loss-of-function variants in endothelial lipase are a cause of elevated HDL cholesterol in humans. (PMID: 19287092) Edmondson AC . Rader DJ The Journal of clinical investigation 2009 3 23 43 56 Physical inactivity interacts with an endothelial lipase polymorphism to modulate high density lipoprotein cholesterol in th

LMNA: Janin A, Bauer D, Ratti F, et al. SMAD6 overexpression leads to accelerated myogenic differentiation of LMNA mutated cells. Scientific Reports. 2018;8:5618. doi:10.1038/s41598-018-23918-x.

LOXHD1: TANG H, ZHANG W, YAN X-M, et al. Analysis of SLC4A11, ZEB1, LOXHD1, COL8A2 and TCF4 gene sequences in a multi-generational family with late-onset Fuchs corneal dystrophy. International Journal of Molecular Medicine. 2016;37(6):1487-1500. doi:10.3892/ijmm.

LPAR1: Nsaibia MJ, Boulanger M-C, Bouchareb R, et al. OxLDL-derived lysophosphatidic acid promotes the progression of aortic valve stenosis through a LPAR1-RhoA-NF- κ B pathway. Cardiovascular Research. 2017;113(11):1351-1363. doi:10.1093/cvr/cvx089.

LPAR6: Raza SI, Muhammad D, Jan A, et al. In Silico Analysis of Missense Mutations in LPAR6 Reveals Abnormal Phospholipid Signaling Pathway Leading to Hypotrichosis. van Steensel MAM, ed. PLoS ONE. 2014;9(8):e104756. doi:10.1371/journal.pone.0104756.

LPL: Additive effects of LPL, APOA5 and APOE variant combinations on triglyceride levels and hypertriglyceridemia: results of the ICARIA genetic sub-study. Ariza MJ1, Sánchez-Chaparro MA, Barón FJ, Hornos AM, Calvo-Bonacho E, Rioja J, Valdivielso P, Gelpi JA, González-Santos P. Genetic-epidemiological evidence on genes associated with HDL cholesterol levels: a systematic in-depth review. Boes E1, Coassin S, Kollerits B, Heid IM, Kronenberg F.

LPP: Elaine Ngan, Konstantin Stoletov, Harvey W. Smith, Jessica Common, William J. Muller, John D. Lewis, Peter M. Siegel Nat Commun. 2017; 8: 15059. Published online 2017 Apr 24. doi: 10.1038/ncomms15059 PMID: PMC5413977 Cecilia S. Leung, Tsz-Lun Yeung, Kay-Pong Yip, Kwong-Kwok Wong, Samuel Y. Ho, Lingegowda S. Mangala, Anil K. Sood, Gabriel Lopez-Berestein, Jianting Sheng, Stephen T.C. Wong, Michael J. Birrer, Samuel C. Mok J Clin Invest. 2018 Feb 1; 128(2): 589–606. Published online 2017 Dec 18

LRP1: Lin J-P, Mironova YA, Shrager P, Giger RJ. LRP1 regulates peroxisome biogenesis and cholesterol homeostasis in oligodendrocytes and is required for proper CNS myelin development and repair. Nave K-A, ed. eLife. 2017;6:e30498. doi:10.7554/eLife.30498.

LRP4: Mosca TJ, Luginbuhl DJ, Wang IE, Luo L. Presynaptic LRP4 promotes synapse number and function of excitatory CNS neurons. VijayRaghavan K, ed. eLife. 2017;6:e27347. doi:10.7554/eLife.27347.

LRP5: Maubant S, Tahtouh T, Brisson A, et al. LRP5 regulates the expression of STK40, a new potential target in triple-negative breast cancers. Oncotarget. 2018;9(32):22586-22604. doi:10.18632/oncotarget.25187.

LRP6: Wang L, Chai Y, Li C, et al. Oxidized phospholipids are ligands for LRP6. Bone Research. 2018;6:22. doi:10.1038/s41413-018-0023-x.

LRP8: WalTMann MD, Basford JE, Konaniah ES, Weintraub NL, Hui DY. Apolipoprotein E receptor-2 deficiency enhances macrophage susceptibility to lipid accumulation and cell death to augment atherosclerotic plaque progression and necrosis. Biochimica et biophysica

LRRK2: Purlyte E, Dhekne HS, Sarhan AR, et al. Rab29 activation of the Parkinson's disease-associated LRRK2 kinase. The EMBO Journal. 2018;37(1):1-18. doi:10.15252/embj.201798099.

LSP1: Cervero P, Wiesner C, Bouissou A, Poincloux R, Linder S. Lymphocyte-specific protein 1 regulates mechanosensory oscillation of podosomes and actin isoform-based actomyosin symmetry breaking. Nature Communications. 2018;9:515. doi:10.1038/s41467-018-02904-

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



LTA: Kang S-S, Kim SK, Baik JE, et al. Staphylococcal LTA antagonizes the B cell-mitogenic potential of LPS. Scientific Reports. 2018;8:1496. doi:10.1038/s41598-018-19653-y.

LUZP2: Stepanov V, Vagaitseva K, Bocharova A, et al. Analysis of Association of Genetic Markers in the LUZP2 and FBXO40 Genes with the Normal Variability in Cognitive Performance in the Elderly. International Journal of Alzheimer’s Disease. 2018;2018:2686045. do

LYPLAL1: Discovery of a Selective Covalent Inhibitor of Lysophospholipase-like 1 (LYPLAL1) as a Tool to Evaluate the Role of this Serine Hydrolase in Metabolism. Ahn K, Boehm M, Brown MF, Calloway J, Che Y, Chen J, Fennell KF, Geoghegan KF, Gilbert AM, Gutierrez JA, Kalgutkar AS, Lanba A, Limberakis C, Magee TV, O'Doherty I, Oliver R, Pabst B, Pandit J, Parris K, Pfefferkorn JA, Rolph TP, Patel R, Schuff B, Shanmugasundaram V, Starr JT, Varghese AH, Vera NB, Vernochet C, Yan J. Genetic predictors of

M6PR: Caster AH, Sztul E, Kahn RA. A Role for Cargo in Arf-dependent Adaptor Recruitment. The Journal of Biological Chemistry. 2013;288(21):14788-14804. doi:10.1074/jbc.M113.453621.

MACROD2: Van den Broek E, den Uil SH, Coupé VMH, et al. MACROD2 expression predicts response to 5-FU-based chemotherapy in stage III colon cancer. Oncotarget. 2018;9(50):29445-29452. doi:10.18632/oncotarget.25655.

MAF: Kim M, Wende H, Walcher J, et al. Maf links Neuregulin1 signaling to cholesterol synthesis in myelinating Schwann cells. Genes & Development. 2018;32(9-10):645-657. doi:10.1101/gad.310490.117.

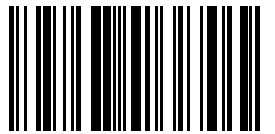
MAGEC3: Eng KH, Szender JB, Etter JL, et al. Paternal lineage early onset hereditary ovarian cancers: A familial Ovarian Cancer Registry study. Eng C, ed. PLoS Genetics. 2018;14(2):e1007194. doi:10.1371/journal.pgen.1007194.

MAGI2: Bierzynska A, Soderquest K, Dean P, et al. MAGI2 Mutations Cause Congenital Nephrotic Syndrome. Journal of the American Society of Nephrology?: JASN. 2017;28(5):1614-1621. doi:10.1681/ASN.2016040387.

MAGT1: Natalia A. Cherepanova, Shiteshu Shrima, Reid Gilmore Cell Biol. 2014 Aug 18; 206(4): 525–539. doi: 10.1083/jcb.201404083PMCID: PMC4137057David L. Lin, Natalia A. Cherepanova, Leonia Bozzacco, Margaret R. MacDonald, Reid Gilmore, Andrew W. TaimBio. 2017 Jul-Aug; 8(4): e00939-17. Published online 2017 Jul 18. doi: 10.1128/mBio.00939-17PMCID: PMC5516256Sara Castiglioni, Valentina Romeo, Laura Locatelli, Alessandra Cazzaniga, Jeanette A. M. MaierSci Rep. 2018; 8: 16195. Published online 2018

MALT1: Kip E, Staal J, Verstrepen L, et al. MALT1 Controls Attenuated Rabies Virus by Inducing Early Inflammation and T Cell Activation in the Brain. Dutch RE, ed. Journal of Virology. 2018;92(8):e02029-17. doi:10.1128/JVI.02029-17.





MAOA: Monoamine oxidase A gene (MAOA) predicts behavioral aggression following provocation. (PMID: 19168625) McDermott R ... Johnson DD Proceedings of the National Academy of Sciences of the United States of America 2009 3 21 39 69 A non-additive interaction of a functional MAO-A VNTR and testosterone predicts antisocial behavior. (PMID: 17429405) Sjöberg RL ... Goldman D Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology 2008 3 21 24 39 Monoamine oxidase-a genetic variations influence brain activity associated with inhibitory control: new insight into the neural correlates of impulsivity. (PMID: 16202396) Passamonti L ... Quattrone A Biological psychiatry 2006 3 21 39 69 20 ans après: a second mutation in MAOA identified by targeted high-throughput sequencing in a family with altered behavior and cognition. (PMID: 24169519) Piton A ... Mandel JL European journal of human genetics : EJHG 2014 3 4 69 Association of VNTR polymorphisms in the MAOA promoter and DRD4 exon 3 with heroin dependence in male Chinese addicts. (PMID: 20218801) Chien CC ... Lung FW The world journal of biological psychiatry : the official journal of the World Federation of Societies of Biological Psychiatry 2010 A proximity-dependent biotinylation map of a human cell. (PMID: 34079125) Go CD ... Gingras AC Nature 2021 3 Dual proteome-scale networks reveal cell-specific remodeling of the human interactome. (PMID: 33961781) Huttlin EL ... Gygi SP Cell 2021 MAOA alters the effects of heavy drinking and childhood physical abuse on risk for severe impulsive acts of violence among alcoholic violent offenders. (PMID: 20201935) Tikkanen R ... Virkkunen M Alcoholism, clinical and experimental research 2010 3 39 Does prior traumatization affect the treatment outcome of CBT for panic disorder? The potential role of the MAOA gene and depression symptoms. (PMID: 28712090) Trautmann S ... Reif A European archives of psychiatry and clinical neuroscience 2019 3 PLEKHA4/kramer Attenuates Dishevelled Ubiquitination to Modulate Wnt and Planar Cell Polarity Signaling. (PMID: 31091453) Shami Shah A ... Baskin JM Cell reports 2019 3 Moderator Effects of Life Stress on the Association between MAOA-uVNTR, Depression, and Burnout. (PMID: 30943524) Plieger T ... Reuter M Neuropsychobiology 2019 3 Role of monoamine-oxidase-A-gene variation in the development of glioblastoma in males: a case control study. (PMID: 31556016) Sjöberg RL ... Melin B Journal of neuro-oncology 2019 Serotonin, genetic variability, behaviour, and psychiatric disorders--a review. (PMID: 20187845) Nordquist N ... Orelund L Upsala journal of medical sciences 2010 3 21 An interaction between the norepinephrine transporter and monoamine oxidase A polymorphisms, and novelty-seeking personality traits in Korean females. (PMID: 17920180) Lee BC ... Ham BJ Progress in neuro-psychopharmacology & biological psychiatry 2008 3 21 The Altered Brain Activation of Phonological Working Memory, Dual Tasking, and Distraction Among Participants With Adult ADHD and the Effect of the MAOA Polymorphism. (PMID: 25777072) Ko CH ... Yen JY Journal of attention disorders 2018 3 Deficiency of Sustained Attention in ADHD and Its Potential Genetic Contributor MAOA. (PMID: 25784069) Liu L ... Wang Y Journal of attention disorders 2018 3 Histone Interaction Landscapes Visualized by Crosslinking Mass Spectrometry in Intact Cell Nuclei. (PMID: 30021884) Fasci D ... Heck AJR Molecular & cellular proteomics : MCP 2018

MAOB: Martyn A. Sharpe, David S. BaskinOncotarget. 2016 Jan 19; 7(3): 3379–3393. Published online 2015 Dec 12. doi: 10.18632/oncotarget.6582PMCID: PMC4823113Bo-Eun Yoon, Junsung Woo, Ye-Eun Chun, Heejung Chun, Seonmi Jo, Jin Young Bae, Heeyoung An, Joo Ok Min, Soo-Jin Oh, Kyung-Seok Han, Hye Yun Kim, Taekeun Kim, Young Soo Kim, Yong Chul Bae, C Justin LeeJ Physiol. 2014 Nov 15; 592(Pt 22): 4951–4968. Published online 2014 Oct 21. doi: 10.1113/jphysiol.2014.278754PMCID: PMC4259537Shang-Yi A. Tsai,

MAP3K1: Avivar-Valderas A, McEwen R, Taheri-Ghahfarokhi A, et al. Functional significance of co-occurring mutations in PIK3CA and MAP3K1 in breast cancer. Oncotarget. 2018;9(30):21444-21458. doi:10.18632/oncotarget.25118.

MAPT: Caneus J, Granic A, Rademakers R, et al. Mitotic defects lead to neuronal aneuploidy and apoptosis in frontotemporal lobar degeneration caused by MAPT mutations. Holzbaur E, ed. Molecular Biology of the Cell. 2018;29(5):575-586. doi:10.1091/mbc.E17-01-003

MAT1A: Yuntao Bing, Siying Zhu, Guozheng Yu, Ting Li, Weijun Liu, Changsheng Li, Yitao Wang, Haolong Qi, Tao Guo, Yufeng Yuan, Yueming He, Zhisu Liu, Quanyan LiuJ Biol Chem. 2014 Nov 21; 289(47): 32639–32655. Published online 2014 Sep 30. doi: 10.1074/jbc.M114.589689PMCID: PMC4239617Heping Yang, Michele E. Cho, Tony W.H. Li, Hui Peng, Kwang Suk Ko, Jose M. Mato, Shelly C. Luj Clin Invest. 2013 Jan 2; 123(1): 285–298. Published online 2012 Dec 17. doi: 10.1172/JCI63861PMCID: PMC3533284Komal Ramani,

MC1R: Chen S, Zhu B, Yin C, et al. Palmitoylation-dependent activation of MC1R prevents melanomagenesis. Nature. 2017;549(7672):399-403. doi:10.1038/nature23887.

Name Sample

Age

Gender

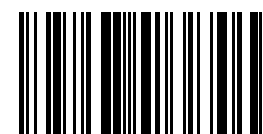
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

MC4R: Giuseppe Bruschetta, Jung Dae Kim, Sabrina Diano, Li F. Chan *Mol Metab.* 2018 Dec; 18: 79-87. Published online 2018 Oct 4. doi: 10.1016/j.molmet.2018.09.010 PMCID: PMC6308034 Faith K. McDaniel, Brent M. Molden, Sameer Mohammad, Giovanna Baldini, Lakisha McPike, Paola Narducci, Susana Granell, Giulia Baldini *Biol Chem.* 2012 Jun 22; 287(26): 21873-21890. Published online 2012 Apr 27. doi: 10.1074/jbc.M112.346890 PMCID: PMC3381150 Brent M. Molden, Kimberly A. Cooney, Kirk West. Association of the

MCCC1: Cao Z, Xia Z, Zhou Y, et al. Methylcrotonoyl-CoA carboxylase 1 potentiates RLR-induced NF- κ B signaling by targeting MAVS complex. *Scientific Reports.* 2016;6:33557. doi:10.1038/srep33557.

MCF2L: Maiwald S, Motazacker MM, van Capelleveen JC, et al. A rare variant in MCF2L identified using exclusion linkage in a pedigree with premature atherosclerosis. *European Journal of Human Genetics.* 2016;24(1):86-91. doi:10.1038/ejhg.2015.70.

MCM6: Liu M, Hu Q, Tu M, et al. MCM6 promotes metastasis of hepatocellular carcinoma via MEK/ERK pathway and serves as a novel serum biomarker for early recurrence. *Journal of Experimental & Clinical Cancer Research?*: CR. 2018;37:10. doi:10.1186/s13046-017-0669

MCT1: Noor SI, Jamali S, Ames S, Langer S, Deitmer JW, Becker HM. A surface proton antenna in carbonic anhydrase II supports lactate transport in cancer cells. Vander Heiden MG, ed. *eLife.* 2018;7:e35176. doi:10.7554/eLife.35176.

MDFIC: Robert H. Oakley, John M. Busillo, John A. Cidlowski *Biol Chem.* 2017 Apr 7; 292(14): 5825–5844. Published online 2017 Feb 21. doi: 10.1074/jbc.M116.758888 PMCID: PMC5392576 Faizan H. Khan, Vijayabaskar Pandian, Satishkumar Ramraj, Mohan Natarajan, Sheeja Aravindan, Terence S. Herman, Natarajan Aravindan *BMC Cancer.* 2015; 15: 514. Published online 2015 Jul 10. doi: 10.1186/s12885-015-1463-y PMCID: PMC4496850 Haiqing Ma, Desheng Weng, Yibing Chen, Wei Huang, Ke Pan, Hui Wang, Jiancong Sun.

MDM2: Raja R, Ronsard L, Lata S, Trivedi S, Banerjea AC. HIV-1 Tat potently stabilises Mdm2 and enhances viral replication. *Biochemical Journal.* 2017;474(14):2449-2464. doi:10.1042/BCJ20160825.

MDS1: Zhang Y, Owens K, Hatem L, et al. Essential role of PR-domain protein MDS1-EVI1 in MLL-AF9 leukemia. *Blood.* 2013;122(16):2888-2892. doi:10.1182/blood-2012-08-453662.

MERTK: Yukako Kayashima, Natalia Makhanova, Nobuyo Maeda *Arterioscler Thromb Vasc Biol.* Author manuscript; available in PMC 2018 Jul 1. Published in final edited form as: *Arterioscler Thromb Vasc Biol.* 2017 Jul; 37(7): e82–e91. Published online 2017 May 4. doi: 10.1161/ATVBAHA.117.309522 PMCID: PMC5497749 Khanh-Quynh N. Nguyen, Wen-I Tsou, Daniel A. Calarese, Stanley G. Kimani, Sukhwinder Singh, Shelly Hsieh, Yongzhang Liu, Bin Lu, Yi Wu, Scott J. Garforth, Steve C. Almo, Sergei V. Kotenko.

MGMT: Mostofa A, Punganuru SR, Madala HR, Srivenugopal KS. S-phase Specific Downregulation of Human O6-Methylguanine DNA Methyltransferase (MGMT) and its Serendipitous Interactions with PCNA and p21cip1 Proteins in Glioma Cells. *Neoplasia* (New York, NY). 2018;2

MLXIPL: Singh P, Irwin DM. Contrasting Patterns in the Evolution of Vertebrate MLX Interacting Protein (MLXIP) and MLX Interacting Protein-Like (MLXIPL) Genes. Bertrand S, ed. *PLoS ONE.* 2016;11(2):e0149682. doi:10.1371/journal.pone.0149682.

MME: Auer-Grumbach M, Toegel S, Schabhüttl M, et al. Rare Variants in MME, Encoding MetalloProteinase Neprilysin, Are Linked to Late-Onset Autosomal-Dominant Axonal Polyneuropathies. *American Journal of Human Genetics.* 2016;99(3):607-623. doi:10.1016/j.ajhg.2016

MMEL1: Saadah OI, Shaik NA, Banaganapalli B, et al. Replication of GWAS Coding SNPs Implicates MMEL1 as a Potential Susceptibility Locus among Saudi Arabian Celiac Disease Patients. *Disease Markers.* 2015;2015:351673. doi:10.1155/2015/351673.

MMP3: Wu Y, Lee M-J, Ido Y, Fried SK. High-fat diet-induced obesity regulates MMP3 to modulate depot- and sex-dependent adipose expansion in C57BL/6J mice. *American Journal of Physiology - Endocrinology and Metabolism.* 2017;312(1):E58-E71. doi:10.1152/ajpendo.0

Name Sample

Age

Gender

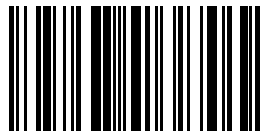
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

MMP9: Appleby TC, Greenstein AE, Hung M, et al. Biochemical characterization and structure determination of a potent, selective antibody inhibitor of human MMP9. The Journal of Biological Chemistry. 2017;292(16):6810-6820. doi:10.1074/jbc.M116.760579.

MOCS1: Mutations in a polycistronic nuclear gene associated with molybdenum cofactor deficiency. (PMID: 9731530) Reiss J . Dierks T Nature genetics 1998 2 3 4 23 58 Ten novel mutations in the molybdenum cofactor genes MOCS1 and MOCS2 and in vitro characterization of a MOCS2 mutation that abolishes the binding ability of molybdopterin synthase. (PMID: 16021469) Leimkühler S . Reiss J Human genetics 2005 3 4 23 58 Characterization of MOCS1A, an oxygen-sensitive iron-sulfur protein involved in human

MOCS2: A novel MOCS2 mutation reveals coordinated expression of the small and large subunit of molybdopterin synthase. (PMID: 16737835) Hahnewald R . Reiss J Molecular genetics and metabolism 2006 2 3 4 23 58 The two subunits of human molybdopterin synthase: evidence for a bicistronic messenger RNA with overlapping reading frames. (PMID: 9889283) Sloan J . Unkles SE Nucleic acids research 1999 2 3 4 23 58 Human molybdopterin synthase gene: genomic structure and mutations in molybdenum cofactor def

MOV10: Skariah G, Seimetz J, Norsworthy M, et al. Mov10 suppresses retroelements and regulates neuronal development and function in the developing brain. BMC Biology. 2017;15:54. doi:10.1186/s12915-017-0387-1.

MPO: Pulli B, Wojtkiewicz G, Iwamoto Y, et al. Molecular MR Imaging of Myeloperoxidase Distinguishes Steatosis from Steatohepatitis in Nonalcoholic Fatty Liver Disease. Radiology. 2017;284(2):390-400. doi:10.1148/radiol.2017160588.

MPV17L2: Mai N, Chrzanowska-Lightowlers ZMA, Lightowlers RN. The process of mammalian mitochondrial protein synthesis. Cell and Tissue Research. 2017;367(1):5-20. doi:10.1007/s00441-016-2456-0.

MRAS: Higgins EM, Bos JM, Mason-Suares H, et al. Elucidation of MRAS-mediated Noonan syndrome with cardiac hypertrophy. JCI Insight. 2017;2(5):e91225. doi:10.1172/jci.insight.91225.

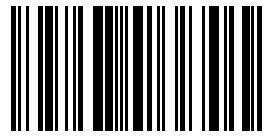
MRPS30: Quigley DA, Fiorito E, Nord S, et al. The 5p12 breast cancer susceptibility locus affects MRPS30 expression in estrogen-receptor positive tumors. Molecular Oncology. 2014;8(2):273-284. doi:10.1016/j.molonc.2013.11.008.

MS4A6A: Lacher SE, Alazizi A, Wang X, et al. A hypermorphic antioxidant response element is associated with increased MS4A6A expression and Alzheimer's disease. Redox Biology. 2018;14:686-693. doi:10.1016/j.redox.2017.10.018. Alzheimer's disease susceptibility variants in the MS4A6A gene are associated with altered levels of MS4A6A expression in blood. Proitsi P1, Lee SH, Lunnon K, Keohane A, Powell J, Troakes C, Al-Sarraj S, Furney S, Soininen H, Kloszewska I, Mecocci P, Tsolaki M, Vellas B, Loves

MSMB: Lou H, Li H, Yeager M, et al. Promoter variants in the MSMB gene associated with prostate cancer regulate MSMB/NCOA4 fusion transcripts. Human genetics. 2012;131(9):1453-1466. doi:10.1007/s00439-012-1182-2.

MSRA: Molecular cloning and functional expression of a human peptide methionine sulfoxide reductase (hMsrA). (PMID: 10452521) Kuschel L ... Heinemann SH FEBS letters 1999 2 3 4 23 Two new Loci for body-weight regulation identified in a joint analysis of genome-wide association studies for early-onset extreme obesity in French and german study groups. (PMID: 20421936) Scherag A ... Meyre D PLoS genetics 2010 3 23 41 Methionine sulfoxide reductase: a novel schizophrenia candidate gene. (PMID: 18506707) Walss-Bass C ... Raventos H American journal of medical genetics. Part B, Neuropsychiatric genetics : the official publication of the International Society of Psychiatric Genetics 2009 3 23 41 Gene structure, localization and role in oxidative stress of methionine sulfoxide reductase A (MSRA) in the monkey retina. (PMID: 16364291) Lee JW ... Rodriguez IR Experimental eye research 2006 3 4 23 Functioning methionine sulfoxide reductases A and B are present in human epidermal melanocytes in the cytosol and in the nucleus. (PMID: 16480945) Schallreuter KU ... Wood JM Biochemical and biophysical research communications 2006

MT1A: Ullio C, Brunk UT, Urani C, et al. Autophagy of metallothioneins prevents TNF-induced oxidative stress and toxicity in hepatoma cells. Autophagy. 2015;11(12):2184-2198. doi:10.1080/15548627.2015.1106662.



MTCH2: Bar-Lev Y, Moshitch-Moshkovitz S, Tsarfaty G, et al. Mimp/Mtch2, an Obesity Susceptibility Gene, Induces Alteration of Fatty Acid Metabolism in Transgenic Mice. Wong GW, ed. PLoS ONE. 2016;11(6):e0157850. doi:10.1371/journal.pone.0157850.

MTF1: Yang X, Chang HR, Yin YW. Yeast Mitochondrial Transcription Factor Mtf1 Determines the Precision of Promoter-Directed Initiation of RNA Polymerase Rpo41. Bhaumik SR, ed. PLoS ONE. 2015;10(9):e0136879. doi:10.1371/journal.pone.0136879.

MTHFD1: Kamynina E, Lachenauer ER, DiRisio AC, Liebenthal RP, Field MS, Stover PJ. Arsenic trioxide targets MTHFD1 and SUMO-dependent nuclear de novo thymidylate biosynthesis. Proceedings of the National Academy of Sciences of the United States of America. 2017;1

MTHFD1L: Lee D, Xu IM-J, Chiu DK-C, et al. Folate cycle enzyme MTHFD1L confers metabolic advantages in hepatocellular carcinoma. The Journal of Clinical Investigation. 2017;127(5):1856-1872. doi:10.1172/JCI90253.

MTHFR: Human methylenetetrahydrofolate reductase: isolation of cDNA, mapping and mutation identification. (PMID: 7920641) Goyette P ... Rozen R Nature genetics 1994 2 3 4 21 70 Systematic meta-analyses and field synopsis of genetic association studies in schizophrenia: the SzGene database. (PMID: 18583979) Allen NC ... Bertram L Nature genetics 2008 3 4 39 70 A common haplotype on methylenetetrahydrofolate reductase gene modifies the effect of angiotensin-converting enzyme inhibitor on blood pressure in essential hypertension patients--a family-based association study. (PMID: 16081343) Jiang S ... Xu X Clinical and experimental hypertension (New York, N.Y. : 1993) 2005 3 21 24 39 Methylenetetrahydrofolate reductase genotype, vitamin B12, and folate influence plasma homocysteine in hemodialysis patients. (PMID: 11979347) Nakamura T ... Hata A American journal of kidney diseases : the official journal of the National Kidney Foundation 2002 3 21 24 39 Polymorphisms in the methylenetetrahydrofolate reductase gene are associated with susceptibility to acute leukemia in adults. (PMID: 10536004) Skibola CF ... Morgan G Proceedings of the National Academy of Sciences of the United States of America 1999 Association of methylenetetrahydrofolate reductase (MTHFR 677C>T and 1298A>C) polymorphisms and haplotypes with silent brain infarction and homocysteine levels in a Korean population. (PMID: 20191019) Han IB ... Kim NK Yonsei medical journal 2010 3 21 39 MTHFR C677T and A1298C variant genotypes and the risk of microsatellite instability among Iranian colorectal cancer patients. (PMID: 20193847) Naghibalhossaini F ... Abdollahi K Cancer genetics and cytogenetics 2010 3 39 Polymorphism C776G in the transcobalamin II gene and homocysteine, folate and vitamin B12 concentrations. Association with MTHFR C677T and A1298C and MTRR A66G polymorphisms in healthy children. (PMID: 16820193) Aléssio AC ... Annichino-Bizzacchi JM Thrombosis research 2007 3 39 Hyperhomocysteinaemia and MTHFR C677T gene polymorphism in renal transplant recipients. (PMID: 11420199) Szabó AJ ... Reusz GS Archives of disease in childhood 2001 3 39 Food Intervention with Folate Reduces TNF- α and Interleukin Levels in Overweight and Obese Women with the MTHFR C677T Polymorphism: A Randomized Trial. (PMID: 32019154) Lisboa JVC ... Costa MJC Nutrients 2020

MTIF3: Identification of mammalian mitochondrial translational initiation factor 3 and examination of its role in initiation complex formation with natural mRNAs. (PMID: 12095986) Koc EC ... Spremulli LL The Journal of biological chemistry 2002 2 3 4 Association analyses of 249,796 individuals reveal 18 new loci associated with body mass index. (PMID: 20935630) Speliotes EK ... Loos RJ Nature genetics 2010 3 40 Genetic variants in nuclear-encoded mitochondrial genes influence AIDS progression. (PMID: 20877624) Hendrickson SL ... O'Brien SJ PloS one 2010 3 40 Coeliac disease-associated risk variants in TNFAIP3 and REL implicate altered NF-kappaB signalling. (PMID: 19240061) Trynka G ... Wijmenga C Gut 2009 3 40 Genetic association analysis of 13 nuclear-encoded mitochondrial candidate genes with type II diabetes mellitus: the DAMAGE study. (PMID: 19209188) Reiling E ... Dekker JM European journal of human genetics : EJHG 2009

MTNR1B: G-allele of intronic rs10830963 in MTNR1B confers increased risk of impaired fasting glycemia and type 2 diabetes through an impaired glucose-stimulated insulin release: studies involving 19,605 Europeans. Sparsø T1, Bonnefond A, Andersson E, Bouatia-Naji N, Holmkvist J, Wegner L, Grarup N, Gjesing AP, Banasik K, Cavalcanti-Proença C, Marchand M, Vaxillaire M, Charpentier G, Jarvelin MR, Tichet J, Balkau B, Marre M, Lévy-Marchal C, Faerch K, Borch-Johnsen K, Jørgensen T, Madsbad S, Poulsen

MTR: Barker JW, Han PK, Choi SH, Bae KT, Park S-H. Investigation of Inter-Slice Magnetization Transfer Effects as a New Method for MTR Imaging of the Human Brain. Lui S, ed. PLoS ONE. 2015;10(2):e0117101. doi:10.1371/journal.pone.0117101.

Name	Sample		
Age	Gender	F	Report date
Prescriber		Health insurance	
		12/09/2025	



MTRR: Orozco LD, Morselli M, Rubbi L, et al. Epigenome-wide association of liver methylation patterns and complex metabolic traits in mice. *Cell metabolism*. 2015;21(6):905-917. doi:10.1016/j.cmet.2015.04.025. Chen J, Wang Q, Yin F-Q, Zhang W, Yan L-H, Li L. MTRR silencing inhibits growth and cisplatin resistance of ovarian carcinoma via inducing apoptosis and reducing autophagy. *American Journal of Translational Research*. 2015;7(9):1510-1527.

MTTP: Newberry EP, Xie Y, Kennedy SM, et al. Prevention of hepatic fibrosis with liver microsomal triglyceride transfer protein deletion in Liver fatty acid binding protein null mice. *Hepatology (Baltimore, Md)*. 2017;65(3):836-852. doi:10.1002/hep.28941.

MUC1: Chalick M, Jacobi O, Pichinuk E, et al. MUC1-ARF—A Novel MUC1 Protein That Resides in the Nucleus and Is Expressed by Alternate Reading Frame Translation of MUC1 mRNA. *Batra SK, ed. PLoS ONE*. 2016;11(10):e0165031. doi:10.1371/journal.pone.0165031.

MYBPC1: Ha K, Buchan JG, Alvarado DM, et al. MYBPC1 mutations impair skeletal muscle function in zebrafish models of arthrogryposis. *Human Molecular Genetics*. 2013;22(24):4967-4977. doi:10.1093/hmg/ddt344.

MYBPC3: Maksymilian Prondzynski, Elisabeth Krämer, Sandra D. Laufer, Aya Shibamiya, Ole Pless, Frederik Flenner, Oliver J. Müller, Julia Münch, Charles Redwood, Arne Hansen, Monica Patten, Thomas Eschenhagen, Giulia Mearini, Lucie CarrierMol Ther Nucleic Acids. 2017 Jun 16; 7: 475–486. Published online 2017 May 17. doi: 10.1016/j.omtn.2017.05.008PMCID: PMC5458066 Amelia A. Glazier, Neha Hafeez, Dattatreya Mellacheruvu, Venkatesha Basrur, Alexey I. Nesvizhskii, Lap Man Lee, Hao Shao, Vi Tang.

MYO16: Ying F. Liu, Sarah M. Sowell, Yue Luo, Alka Chaubey, Richard S. Cameron, Hyung-Goo Kim, Anand K. SrivastavaPLoS One. 2015; 10(4): e0123106. Published online 2015 Apr 22. doi: 10.1371/journal.pone.0123106PMCID: PMC4406691 Article Pub Reader Laura Rodriguez-Murillo, Bin Xu, J Louw Roos, Gonçalo R Abecasis, Joseph A Gogos, Maria Karayiorgou Neuropsychopharmacology. 2014 Mar; 39(4): 934–943. Prepublished online 2013 Oct 21. Published online 2013 Nov 20.

MYO1B: Olga Iuliano, Azumi Yoshimura, Marie-Thérèse Prospéri, René Martin, Hans-Joachim Knölker, Evelyne CoudrierJ Cell Biol. 2018 Jun 4; 217(6): 2033–2046. doi: 10.1083/jcb.201703205PMCID: PMC5987710Marie-Thérèse Prospéri, Priscilla Lépine, Florent Dingli, Perrine Paul-Gilloteaux, René Martin, Damarys Loew, Hans-Joachim Knölker, Evelyne CoudrierJ Cell Biol. 2015 Jul 20; 210(2): 347–361. doi: 10.1083/jcb.201501018PMCID: PMC4508888Shigeru Komaba, Lynne M. ColuccioPLoS One. 2015; 10(9): e0138012. Pu

MYO9B: Yi F, Kong R, Ren J, et al. Noncanonical Myo9b-RhoGAP Accelerates RhoA GTP Hydrolysis by a Dual-Arginine-Finger Mechanism. *Journal of molecular biology*. 2016;428(15):3043-3057. doi:10.1016/j.jmb.2016.06.014.

MYRF: cDNA cloning and genomic structure of a novel gene (C11orf9) localized to chromosome 11q12-->q13.1 which encodes a highly conserved, potential membrane-associated protein. (PMID: 10828591) Stöhr H . Weber BH Cytogenetics and cell genetics 2000 2 3 4 56 De novo variants in Myelin regulatory factor (MYRF) as candidates of a new syndrome of cardiac and urogenital anomalies. (PMID: 29446546) Pinz H . Bhoj EJ American journal of medical genetics. Part A 2018 3 4 56 De novo variants in congenital

MYT1L: Blanchet P, Bebin M, Bruet S, et al. MYT1L mutations cause intellectual disability and variable obesity by dysregulating gene expression and development of the neuroendocrine hypothalamus. *Stark Z, ed. PLoS Genetics*. 2017;13(8):e1006957. doi:10.1371/journ



Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



NAA10: Biochemical and cellular analysis of Ogden syndrome reveals downstream Nt-acetylation defects. (PMID: 25489052) Myklebust LM ... Arnesen T Human molecular genetics 2015 3 4 70 A splice donor mutation in NAA10 results in the dysregulation of the retinoic acid signalling pathway and causes Lenz microphthalmia syndrome. (PMID: 24431331) Esmailpour T ... Huang T Journal of medical genetics 2014 3 4 70 Using VAAST to identify an X-linked disorder resulting in lethality in male infants due to N-terminal acetyltransferase deficiency. (PMID: 21700266) Rope AF ... Lyon GJ American journal of human genetics 2011 3 4 70 Proteomics analyses reveal the evolutionary conservation and divergence of N-terminal acetyltransferases from yeast and humans. (PMID: 19420222) Arnesen T ... Gevaert K Proceedings of the National Academy of Sciences of the United States of America 2009 2 3 4 A synopsis of eukaryotic Nalpha-terminal acetyltransferases: nomenclature, subunits and substrates. (PMID: 19660095) Polevoda B ... Sherman F BMC proceedings 2009 Genetic variants in the renin-angiotensin-aldosterone system and salt sensitivity of blood pressure - Dongfeng Gu 1, Tanika N Kelly, James E Hixson, Jing Chen, Depei Liu, Ji-chun Chen, Dabeeru C Rao, Jianjun Mu, Jixiang Ma, Cashell E Jaquish, Treva K Rice, Charles Gu, L Lee Hamm, Paul K Whelton, Jiang He

NAA25: Polimorfismos Genéticos Associados à Razão Neutrófilo-Linfócito e suas Implicações Clínicas para os Fatores de Risco Metabólicos Os genes Park B, Choe EK, Kang HY, Shin E, Lee S e Won S. Jornal de Medicina Clínica. 2018; 7 (8): 204. doi: 10.3390 / jcm7080204

NADSYN1: Marin TL, Gongol B, Martin M, et al. Identification of AMP-activated protein kinase targets by a consensus sequence search of the proteome. BMC Systems Biology. 2015;9:13. doi:10.1186/s12918-015-0156-0.

NAF1: hNaf1 is required for accumulation of human box H/ACA snoRNPs, scaRNPs, and telomerase. (PMID: 16601202) Hoareau-Aveilla C ... Henry Y RNA (New York, N.Y.) 2006 2 3 4 Stepwise RNP assembly at the site of H/ACA RNA transcription in human cells. (PMID: 16618814) Darzacq X ... Meier UT The Journal of cell biology 2006 2 3 4 Analysis of copy number variation in 8,842 Korean individuals reveals 39 genes associated with hepatic biomarkers AST and ALT. (PMID: 20797317) Kim HY ... Kim H BMB reports 2010 3 39 Common variants in the trichohyalin gene are associated with straight hair in Europeans. (PMID: 19896111) Medland SE ... Martin NG American journal of human genetics 2009 3 39 Dynamic association and localization of human H/ACA RNP proteins. (PMID: 17135485) Kittur N ... Meier UT RNA (New York, N.Y.) 2006 3 Telomere Length and Male Fertility. (PMID: 33921254) Gentiluomo M ... Campa D International journal of molecular sciences 2021

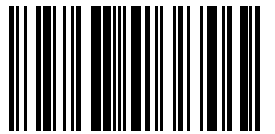
NAMPT: Cloning and characterization of the cDNA encoding a novel human pre-B-cell colony-enhancing factor. (PMID: 8289818) Samal B ... McNiece I Molecular and cellular biology 1994 2 3 4 21 Genetic variant in visfatin gene promoter is associated with decreased risk of coronary artery disease in a Chinese population. (PMID: 19804767) Yan JJ ... Huang J Clinica chimica acta; international journal of clinical chemistry 2010 3 21 39 The visfatin (PBEF1) G-948T gene polymorphism is associated with increased high-density lipoprotein cholesterol in obese subjects. (PMID: 18940394) Johansson LM ... Ridderstråle M Metabolism: clinical and experimental 2008 3 21 39 Molecular basis for the inhibition of human NMPRTase, a novel target for anticancer agents. (PMID: 16783377) Khan JA ... Tong L Nature structural & molecular biology 2006 3 4 21 Visfatin as a novel mediator released by inflamed human endothelial cells. (PMID: 24130902) Romacho T ... Peiró C PloS one 2013

NAT1: Millner LM, Doll MA, Cai J, States JC, Hein DW. Phenotype of the Most Common "Slow Acetylator" Arylamine N-Acetyltransferase 1 Genetic Variant (NAT1*14B) Is Substrate-Dependent. Drug Metabolism and Disposition. 2012;40(1):198-204. doi:10.1124/dmd.111.0418

NAT2: Podgorná E, Diallo I, Vangenot C, et al. Variation in NAT2 acetylation phenotypes is associated with differences in food-producing subsistence modes and ecoregions in Africa. BMC Evolutionary Biology. 2015;15:263. doi:10.1186/s12862-015-0543-6.

NBDY: Ransohoff JD, Wei Y, Khavari PA. The functions and unique features of long intergenic non-coding RNA. Nature reviews Molecular cell biology. 2018;19(3):143-157. doi:10.1038/nrm.2017.104.

NBPF3: Lecat S, Matthes HWD, Pepperkok R, Simpson JC, Galzi J-L. A Fluorescent Live Imaging Screening Assay Based on Translocation Criteria Identifies Novel Cytoplasmic Proteins Implicated in G Protein-coupled Receptor Signaling Pathways . Molecular & Cellular P



NCKAP5: A novel ligand for an SH3 domain of the adaptor protein Nck bears an SH2 domain and nuclear signaling motifs. (PMID: 9344857) Matuoka K ... Takenawa T Biochemical and biophysical research communications 1997 2 3 4 A genome-wide association study in the Japanese population confirms 9p21 and 14q23 as susceptibility loci for primary open angle glaucoma. (PMID: 22419738) Osman W ... Nakamura Y Human molecular genetics 2012 3 39 A genome-wide meta-analysis identifies novel loci associated with schizophrenia and bipolar disorder. (PMID: 20889312) Wang KS ... Aragam N Schizophrenia research 2010 3 39 Genome-wide association analysis of susceptibility and clinical phenotype in multiple sclerosis. (PMID: 19010793) Baranzini SE ... Oksenberg JR Human molecular genetics 2009 3 39 Genome-wide association scan of quantitative traits for attention deficit hyperactivity disorder identifies novel associations and confirms candidate gene associations. (PMID: 18821565) Lasky-Su J ... Faraone SV American journal of medical genetics. Part B, Neuropsychiatric genetics : the official publication of the International Society of Psychiatric Genetics 2008

NCOA3: Li Y, Li L, Chen M, et al. MAD2L2 inhibits colorectal cancer growth by promoting NCOA3 ubiquitination and degradation. Molecular Oncology. 2018;12(3):391-405. doi:10.1002/1878-0261.12173.

NDUFA8: The nuclear-encoded human NADH:ubiquinone oxidoreductase NDUFA8 subunit: cDNA cloning, chromosomal localization, tissue distribution, and mutation detection in complex-I-deficient patients. (PMID: 9860297) Triepels R ... Smeitink J Human genetics 1998 3 4 21 Accessory subunits are integral for assembly and function of human mitochondrial complex I. (PMID: 27626371) Stroud DA ... Ryan MT Nature 2016 3 4 Protein import and oxidative folding in the mitochondrial intermembrane space of intact mammalian cells. (PMID: 23676665) Fischer M ... Riemer J Molecular biology of the cell 2013 3 4 NDUF7 and NDUFA8 are located at the intermembrane surface of complex I. (PMID: 21310150) Szklarczyk R ... Huynen MA FEBS letters 2011 3 4 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE ... Uhl GR Molecular medicine (Cambridge, Mass.) 2010 Interactome Mapping Provides a Network of Neurodegenerative Disease Proteins and Uncovers Widespread Protein Aggregation in Affected Brains. (PMID: 32814053) Haenig C ... Wanker EE Cell reports 2020 3 Unbiased Profiling of the Human Proinsulin Biosynthetic Interaction Network Reveals a Role for Peroxiredoxin 4 in Proinsulin Folding. (PMID: 32457219) Tran DT ... Itkin-Ansari P Diabetes 2020 3 Systems analysis of RhoGEF and RhoGAP regulatory proteins reveals spatially organized RAC1 signalling from integrin adhesions. (PMID: 32203420) Müller PM ... Rocks O Nature cell biology 2020 3 A High-Density Human Mitochondrial Proximity Interaction Network. (PMID: 32877691) Antonicka H ... Shoubridge EA Cell metabolism 2020 3 Biallelic mutations in NDUFA8 cause complex I deficiency in two siblings with favorable clinical evolution. (PMID: 33153867) Tort F ... Ribes A Molecular genetics and metabolism 2020

NEDD4L: Ding Y, Zhang Y, Xu C, Tao Q-H, Chen Y-G. HECT Domain-containing E3 Ubiquitin Ligase NEDD4L Negatively Regulates Wnt Signaling by Targeting Dishevelled for proteasomal Degradation. The Journal of Biological Chemistry. 2013;288(12):8289-8298. doi:10.1074/jbc.M112.433185.

NEGR1: Singh K, Loreth D, Pöttker B, et al. Neuronal Growth and Behavioral Alterations in Mice Deficient for the Psychiatric Disease-Associated Negr1 Gene. Frontiers in Molecular Neuroscience. 2018;11:30. doi:10.3389/fnmol.2018.00030.

NFE2L2: Pajares M, Jiménez-Moreno N, García-Yagüe ÁJ, et al. Transcription factor NFE2L2/NRF2 is a regulator of macroautophagy genes. Autophagy. 2016;12(10):1902-1916. doi:10.1080/15548627.2016.1208889.

NFKBIE: Imamura H, Yoshina S, Ikari K, Miyazawa K, Momohara S, Mitani S. Impaired NFKBIE gene function decreases cellular uptake of methotrexate by down-regulating SLC19A1 expression in a human rheumatoid arthritis cell line. Modern Rheumatology. 2016;26(4):507-5

NGF: Ahluwalia A, Jones MK, Hoa N, Zhu E, Brzozowski T, Tarnawski AS. Reduced NGF in Gastric Endothelial Cells Is One of the Main Causes of Impaired Angiogenesis in Aging Gastric Mucosa. Cellular and Molecular Gastroenterology and Hepatology. 2018;6(2):199-213

NINJ2: Guozhuan Zhang, Yingjiao Sun, Lei Wang, Hui Tian, Lishuang LiangOncotarget. 2017 Sep 22; 8(42): 71520–71527. Published online 2017 May 4. doi: 10.18632/oncotarget.17640PMCID: PMC5641067Joshua C. Bis, Anita DeStefano, Xiaoming Liu, Jennifer A. Brody, Seung Hoan Choi, Benjamin F. J. Verhaaren, Stéphanie Debette, M. Arfan Ikram, Eyal Shahar, Kenneth R. Butler, Jr, Rebecca F. Gottesman, Donna Muzny, Christie L. Kovar, Bruce M. Psaty, Albert Hofman, Thomas Lumley, Mayetri Gupta, Philip A. Wolf,

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



NIPSNAP3B: Olga Y. Gorlova, Yafang Li, Ivan Gorlov, Jun Ying, Wei V. Chen, Shervin Assassi, John D. Reville, Frank C. Arnett, Xiaodong Zhou, Lara Bossini-Castillo, Elena Lopez-Isac, Marialbert Acosta-Herrera, Peter K. Gregersen, Annette T. Lee, Virginia D. Steen, Barri J. Fessler, Dinesh Khanna, Elena Schiopu, Richard M. Silver, Jerry A. Molitor, Daniel E. Furst, Suzanne Kafaja, Robert W. Simms, Robert A. Lafyatis, Patricia Carreira, Carmen Pilar Simeon, Ivan Castellvi, Emma Beltran, Norberto Ortego.

NKAIN3: Xu X, Zheng Z, Jia L, et al. Overexpression of SMARCA2 or CAMK2D is associated with cisplatin resistance in human epithelial ovarian cancer. *Oncology Letters*. 2018;16(3):3796-3804. doi:10.3892/ol.2018.9109.

NLRP1: Jin Y, Birlea SA, PR Fain, Spritz RA. Variações genéticas na NALP1 estão associadas ao vitiligo generalizado em uma população romena. *J Invest Dermatol*. Novembro de 2007; 127 (11): 2558-62. Epub 2007 19 de julho.Citação no PubMed Jin Y, Mailloux CM, Gowan K, Riccardi SL, LaBerge G, Bennett DC, PR Fain, Spritz RA. NALP1 em doença auto-imune múltipla associada ao vitiligo. *N Engl J Med*. 22 de março de 2007; 356 (12): 1216-25.Citação no PubMed

NLRP3: Wang W, Xiao F, Wan P, et al. EV71 3D Protein Binds with NLRP3 and Enhances the Assembly of Inflammasome Complex. Luo GG, ed. *PLoS Pathogens*. 2017;13(1):e1006123. doi:10.1371/journal.ppat.1006123.

NLRP8: Jia-Qi Chu, Ge Shi, Yi-Ming Fan, In-Wook Choi, Guang-Ho Cha, Yu Zhou, Young-Ha Lee, Juan-Hua QuanKorean J Parasitol. 2016 Dec; 54(6): 711–717. Published online 2016 Dec 31. doi: 10.3347/kjp.2016.54.6.711PMCID: PMC5266351 Gabrielle Bradshaw, Robbie R. Lualhati, Cassie L. Albury, Neven Maksemous, Deidre Roos-Araujo, Robert A. Smith, Miles C. Benton, David A. Eccles, Rod A. Lea, Heidi G. Sutherland, Larisa M. Haupt, Lyn R. GriffithsFront Immunol. 2018; 9: 420. Published online 2018 Mar 5.

NMB: Influence of maternal educational level on the association between the rs3809508 neuromedin B gene polymorphism and the risk of obesity in the HELENA study. (PMID: 20010906) Pigeyre M . HELENA Study group International journal of obesity (2005) 2010 3 23 43 56 Neuromedin beta: P73T polymorphism in overweight and obese subjects. (PMID: 18271693) Spálová J . Hainer V Physiological research 2008 3 23 43 56 Significant association between a silent polymorphism in the neuromedin B gene and body

NMNAT2: Yousuf O. Ali, Hunter M. Allen, Lei Yu, David Li-Kroeger, Dena Bakhshizadehmahmoudi, Asante Hatcher, Cristin McCabe, Jishu Xu, Nicole Bjorklund, Giulio Taglialatela, David A. Bennett, Philip L. De Jager, Joshua M. Shulman, Hugo J. Bellen, Hui-Chen LuPLoS Biol. 2016 Jun; 14(6): e1002472. Published online 2016 Jun 2. doi: 10.1371/journal.pbio.1002472PMCID: PMC4890852 Yousuf O. Ali, Gillian Bradley, Hui-Chen LuSci Rep. 2017; 7: 43846. Published online 2017 Mar 7.

NOD2: Gresnigt MS, Cunha C, Jaeger M, et al. Genetic deficiency of NOD2 confers resistance to invasive aspergillosis. *Nature Communications*. 2018;9:2636. doi:10.1038/s41467-018-04912-3.

NOS3: Postberg J, Kandars M, Forcob S, et al. CpG signalling, H2A.Z/H3 acetylation and microRNA-mediated deferred self-attenuation orchestrate foetal NOS3 expression. *Clinical Epigenetics*. 2015;7(1):9. doi:10.1186/s13148-014-0042-4.

NOTCH2: Wang W, Yu S, Myers J, et al. Notch2 blockade enhances hematopoietic stem cell mobilization and homing. *Haematologica*. 2017;102(10):1785-1795. doi:10.3324/haematol.2017.168674.

NOTCH4: Lin X, Sun B, Zhu D, et al. Notch4+ cancer stem-like cells promote the metastatic and invasive ability of melanoma. *Cancer Science*. 2016;107(8):1079-1091. doi:10.1111/cas.12978.

NOV: Imen Nouioui, Lorena Carro, Marina García-López, Jan P. Meier-Kolthoff, Tanja Woyke, Nikos C. Kyrpides, Rüdiger Pukall, Hans-Peter Klenk, Michael Goodfellow, Markus GökerFront Microbiol. 2018; 9: 2007. Published online 2018 Aug 22. doi: 10.3389/fmicb.2018.02007PMCID: PMC6113628 Moran Brouk, Yuval Nov, Ayelet FishmanAppl Environ Microbiol. 2010 Oct; 76(19): 6397–6403. Published online 2010 Aug 13. doi: 10.1128/AEM.00878-10PMCID: PMC2950464 Chun-Xia Wang, Xin Xu, Shu-Qiang Li.

NPAS2: Ozburn AR, Kern J, Parekh PK, et al. NPAS2 Regulation of Anxiety-Like Behavior and GABAA Receptors. *Frontiers in Molecular Neuroscience*. 2017;10:360. doi:10.3389/fnmol.2017.00360.





NPM2: Ellard K, Serpa JJ, Petrotchenko EV, Borchers CH, Ausió J. Expression and purification of the full murine NPM2 and study of its interaction with protamines and histones. *Biochemistry and Biophysics Reports*. 2016;6:165-171. doi:10.1016/j.bbrep.2016.04.002.

NPPA: Man J, Barnett P, Christoffels VM. Structure and function of the Nppa–Nppbcluster locus during heart development and disease. *Cellular and Molecular Life Sciences*. 2018;75(8):1435-1444. doi:10.1007/s00018-017-2737-0. Pereira NL, Tosakulwong N, Scott CG, et al. Circulating ANP Genetic Association Study Identifies a Novel Gene Cluster Associated with Stroke in Caucasians. *Circulation Cardiovascular genetics*. 2015;8(1):141-149. doi:10.1161/CIRCGENETICS.114.000624.

NQO1: Siegel D, Dehn DD, Bokatzian SS, et al. Redox modulation of NQO1. Bratton SB, ed. *PLoS ONE*. 2018;13(1):e0190717. doi:10.1371/journal.pone.0190717.

NQO2: Kinetic mechanism of quinone oxidoreductase 2 and its inhibition by the antimalarial quinolines. (PMID: 15078100) Kwiek JJ ... Rudolph J *Biochemistry* 2004 3 4 23 26 Crystal structure of human quinone reductase type 2, a metalloflavoprotein. (PMID: 10433694) Foster CE ... Amzel LM *Biochemistry* 1999 3 4 23 26 Nucleotide and deduced amino acid sequence of a human cDNA (NQO2) corresponding to a second member of the NAD(P)H:quinone oxidoreductase gene family. Extensive polymorphism at the NQO2 gene locus on chromosome 6. (PMID: 1691923) Jaiswal AK ... McBride OW *Biochemistry* 1990 2 3 4 23 Investigation of a functional quinone oxidoreductase (NQO2) polymorphism and cognitive decline. (PMID: 18538895) Payton A ... Horan M *Neurobiology of aging* 2010 3 23 41 The structure of the leukemia drug imatinib bound to human quinone reductase 2 (NQO2). (PMID: 19236722) Winger JA ... Kuriyan J *BMC structural biology* 2009

NR1D1: Goto M, Mizuno M, Matsumoto A, et al. Role of a circadian-relevant gene NR1D1 in brain development: possible involvement in the pathophysiology of autism spectrum disorders. *Scientific Reports*. 2017;7:43945. doi:10.1038/srep43945.

NR2F2-AS1: Li X, liang X, Zhou L, et al. Analysis of Differential Expressions of Long Non-coding RNAs in Nasopharyngeal Carcinoma Using Next-generation Deep Sequencing. *Journal of Cancer*. 2018;9(11):1943-1950. doi:10.7150/jca.23481.

NR3C1: Ash GI, Kostek MA, Lee H, et al. Glucocorticoid Receptor (NR3C1) Variants Associate with the Muscle Strength and Size Response to Resistance Training. Fine ML, ed. *PLoS ONE*. 2016;11(1):e0148112. doi:10.1371/journal.pone.0148112.

NT5C3A: Livingstone M, Sikström K, Robert PA, Uzé G, Larsson O, Pellegrini S. Assessment of mTOR-Dependent Translational Regulation of Interferon Stimulated Genes. Langsley G, ed. *PLoS ONE*. 2015;10(7):e0133482. doi:10.1371/journal.pone.0133482.

NTF3: Peng W, Zhu S, Wang J, Chen L, Weng J, Chen S. Lnc-NTF3-5 promotes osteogenic differentiation of maxillary sinus membrane stem cells via sponging miR-93-3p. *Clinical Implant Dentistry and Related Research*. 2018;20(2):110-121. doi:10.1111/cid.12553.

NUTF2: Identification of NTF2, a cytosolic factor for nuclear import that interacts with nuclear pore complex protein p62. (PMID: 7744965) Paschal BM . Gerace L *The Journal of cell biology* 1995 2 3 4 23 58 A new role for nuclear transport factor 2 and Ran: nuclear import of CapG. (PMID: 18266911) Van Impe K . Gettemans J *Traffic (Copenhagen, Denmark)* 2008 3 4 23 58 Monoclonal antibodies to NTF2 inhibit nuclear protein import by preventing nuclear translocation of the GTPase Ran. (PMID: 10679025) S

NXPH1: Vallée Marcotte B, Guénard F, Cormier H, et al. Plasma Triglyceride Levels May Be Modulated by Gene Expression of IQCJ, NXPH1, PHF17 and MYB in Humans. Ferguson L, Parslow VR, eds. *International Journal of Molecular Sciences*.

OLR1: Arslan C, Bayoglu B, Tel C, Cengiz M, Dirican A, Besirli K. Upregulation of OLR1 and IL17A genes and their association with blood glucose and lipid levels in femoropopliteal artery disease. *Experimental and Therapeutic Medicine*. 2017;13(3):1160-1168. doi:

OPRM1: Yamano S, Viet CT, Dang D, et al. Ex vivo non-viral gene delivery of μ -opioid receptor (OPRM1) to attenuate cancer-induced pain. *Pain*. 2017;158(2):240-251.



OR4A46P: Loci influencing lipid levels and coronary heart disease risk in 16 European population cohorts. (PMID: 19060911)
Aulchenko YS . ENGAGE Consortium Nature genetics 2009

OVCH2: Giulio Pavesi, Federico Zambelli, Corrado Caggese, Graziano PesoleNucleic Acids Res. 2008 May; 36(8): e47. Published online 2008 Apr 8. doi: 10.1093/nar/gkn153PMCID: PMC2377436Sevtap Savas, Sukru Tuzmen, Hilmi OzcelikHum Genomics. 2006; 2(5): 274–286. Published online 2006 Mar 1. doi: 10.1186/1479-7364-2-5-274PMCID: PMC3500177Larry A. Coggburn, Danielle N. Smarsh, Xiaofei Wang, Nares Trakooljul, Wilfrid Carré, Harold B. White, IIIBMC Genomics. 2018; 19: 177. Published online 2018 Mar 5. doi:

OXTR: He J, Buil JM, Koot HM, van Lier PAC. Associations between Oxytocin Receptor (OXTR) Genotype and Elementary School Children's Likability, Dis-likability and Friendship among Classroom Peers: A Longitudinal Study. Journal of Youth and Adolescence. 2018 Polymorphisms in the oxytocin receptor gene are associated with the development of psychopathy. Dadds MR1, Moul C1, Cauchi A1, Dobson-Stone C1, Hawes DJ2, Brennan J3, Urwin R4, Ebstein RE5. The association between oxytocin receptor gene polymo

PACERR: Teng H, Mao F, Liang J, et al. Transcriptomic signature associated with carcinogenesis and aggressiveness of papillary thyroid carcinoma. Theranostics. 2018;8(16):4345-4358. doi:10.7150/thno.26862.

PADI4: Zheng Y, Zhao G, Xu B, et al. PADI4 has genetic susceptibility to gastric carcinoma and upregulates CXCR2, KRT14 and TNF-? expression levels. Oncotarget. 2016;7(38):62159-62176. doi:10.18632/oncotarget.11398.

PARK2: <https://genecards.weizmann.ac.il/v3/cgi-bin/carddisp.pl?gene=PARK2> Transcriptional repression of p53 by parkin and impairment by mutations associated with autosomal recessive juvenile Parkinson's disease. (PMID: 19801972) da Costa CA ... Checler F Nature cell biology 2009 3 4 21 69 Association between early-onset Parkinson's disease and mutations in the parkin gene. (PMID: 10824074) Lücking CB ... European Consortium on Genetic Susceptibility in Parkinson's Disease The New England journal of medicine 2000 3 4 21 69 Mutations in the parkin gene cause autosomal recessive juvenile parkinsonism. (PMID: 9560156) Kitada T ... Shimizu N Nature 1998 2 3 4 69 A molecular explanation for the recessive nature of parkin-linked Parkinson's disease. (PMID: 23770917) Spratt DE ... Shaw GS Nature communications 2013 3 4 69 Systematic review and UK-based study of PARK2 (parkin), PINK1, PARK7 (DJ-1) and LRRK2 in early-onset Parkinson's disease. (PMID: 22956510) Kilarski LL ... Morris HR Movement disorders : official journal of the Movement Disorder Society 2012

PARK7: Yasuomi Urano, Chinatsu Mori, Ayano Fuji, Keito Konno, Takayuki Yamamoto, Shohei Yashirogi, Mayu Ando, Yoshiro Saito, Noriko NoguchiAutophagy. 2018; 14(11): 1943–1958. Published online 2018 Aug 16. doi: 10.1080/15548627.2018.1493043PMCID: PMC6152502Bao Wang, Zhibiao Cai, Kai Tao, Weijun Zeng, Fangfang Lu, Ruixin Yang, Dayun Feng, Guodong Gao, Qian YangAutophagy. 2016 Aug; 12(8): 1215–1228. Published online 2016 May 12. doi: 10.1080/15548627.2016.1179401PMCID: PMC4968227Hui Yu, Jolena N. Wad

PAX4: Xu Y, Wang Y, Song Y, et al. Generation and Phenotype Identification of PAX4Gene Knockout Rabbit by CRISPR/Cas9 System. G3: Genes | Genomes | Genetics. 2018;8(8):2833-2840. doi:10.1534/g3.118.300448.

PCAT19: Ronchetti D, Agnelli L, Pietrelli A, et al. A compendium of long non-coding RNAs transcriptional fingerprint in multiple myeloma. Scientific Reports. 2018;8:6557. doi:10.1038/s41598-018-24701-8.

PCDH11X: Johansson MM, Lundin E, Qian X, et al. Spatial sexual dimorphism of X and Y homolog gene expression in the human central nervous system during early male development. Biology of Sex Differences. 2016;7:5. doi:10.1186/s13293-015-0056-4.

PCDH9: Xie Z, Zhou F, Yang Y, et al. Lnc-PCDH9-13:1 Is a Hypersensitive and Specific Biomarker for Early Hepatocellular Carcinoma. EBioMedicine. 2018;33:57-67. doi:10.1016/j.ebiom.2018.06.026.

PCIF1: Kathryn C. Claiborn, Mira M. Sachdeva, Corey E. Cannon, David N. Groff, Jeffrey D. Singer, Doris A. StoffersJ Clin Invest. 2010 Oct 1; 120(10): 3713–3721. Published online 2010 Sep 1. doi: 10.1172/JCI40440PMCID: PMC2947215Aihua Liu, Biva M. Desai, Doris A. StoffersMol Cell Biol. 2004 May; 24(10): 4372–4383. doi: 10.1128/MCB.24.10.4372-4383.2004PMCID: PMC400448Sabrina Klein, Rui Meng, Mathias Montenarh, Claudia GötzPharmaceuticals (Basel) 2017 Mar; 10(1): 2. Published online 2016 Dec 28. doi



PCK1: A Leu184Val polymorphism in PCK1 gene is associated with type 2 diabetes in Eastern Chinese population with BMI<23 kg/m². (PMID: 19070910) Dong Y ... Su Q Diabetes research and clinical practice 2009 3 21 39 The promoter polymorphism -232C/G of the PCK1 gene is associated with type 2 diabetes in a UK-resident South Asian population. (PMID: 19725958) Rees SD ... Kelly MA BMC medical genetics 2009 3 21 39 The estrogen hypothesis of schizophrenia implicates glucose metabolism: association study in three independent samples. (PMID: 18460190) Olsen L ... Werge T BMC medical genetics 2008 3 21 39 Association of the promoter polymorphism -232C/G of the phosphoenolpyruvate carboxykinase gene (PCK1) with Type 2 diabetes mellitus. (PMID: 16620271) Gouni-Berthold I ... Krone W Diabetic medicine : a journal of the British Diabetic Association 2006 3 21 39 Large-scale study of the -232C > G polymorphism of PCK1 in Type 2 diabetes. (PMID: 16978381) Wegner L ... Pedersen O Diabetic medicine : a journal of the British Diabetic Association 2006 PCK1 and DHODH drive colorectal cancer liver metastatic colonization and hypoxic growth by promoting nucleotide synthesis. (PMID: 31841108) Yamaguchi N ... Tavazoie SF eLife 2019 3 RNA-seq reveals outcome-specific gene expression of MMP7 and PCK1 in biliary atresia. (PMID: 31342296) Ramachandran P ... Mahalingam S Molecular biology reports 2019 3 Relationships of SLC2A4, RBP4, PCK1, and PI3K Gene Polymorphisms with Gestational Diabetes Mellitus in a Chinese Population. (PMID: 30805369) Hu S ... Tan H BioMed research international 2019 3 Increased expression of phosphoenolpyruvate carboxykinase cytoplasmic isoform by hepatitis B virus X protein affects hepatitis B virus replication. (PMID: 30168585) Tang X ... Tang H Journal of medical virology 2019 3 PCK1 negatively regulates cell cycle progression and hepatoma cell proliferation via the AMPK/p27Kip1 axis. (PMID: 30717766) Tuo L ... Tang N Journal of experimental & clinical cancer research : CR 2019 The gluconeogenic enzyme PCK1 phosphorylates INSIG1/2 for lipogenesis. (PMID: 32322062) Xu D ... Lu Z Nature 2020 3 4 Recognition of the gluconeogenic enzyme, Pck1, via the Gid4 E3 ligase: An in silico perspective. (PMID: 31883179) Ismail AM ... Elshemey WM Journal of molecular recognition : JMR 2020 3 Hypoxia increases the rate of renal gluconeogenesis via hypoxia-inducible factor-1-dependent activation of phosphoenolpyruvate carboxykinase expression. (PMID: 32045650) Owczarek A ... Winiarska K Biochimie 2020 3 Hepatocellular carcinoma cell-derived extracellular vesicles encapsulated microRNA-584-5p facilitates angiogenesis through PCK1-mediated nuclear factor E2-related factor 2 signaling pathway. (PMID: 32522621) Shao Z ... Zhang Y The international journal of biochemistry & cell biology 2020 3 Cytosolic phosphoenolpyruvate carboxykinase is expressed in α -cells from human and murine pancreas. (PMID: 31180589) Westermeier F ... Bertinat R Journal of cellular physiology 2020

PCSK1: Ramos-Molina B, Martin MG, Lindberg I. PCSK1 Variants and Human Obesity. Progress in molecular biology and translational science. 2016;140:47-74. doi:10.1016/bs.pmbts.2015.12.001.

PCSK9: Glerup S, Schulz R, Laufs U, Schlüter K-D. Physiological and therapeutic regulation of PCSK9 activity in cardiovascular disease. Basic Research in Cardiology. 2017;112(3):32. doi:10.1007/s00395-017-0619-0.

PDE11A: Kelly MP. A Role for Phosphodiesterase 11A (PDE11A) in the Formation of Social Memories and the Stabilization of Mood. Advances in neurobiology. 2017;17:201-230. doi:10.1007/978-3-319-58811-7_8.

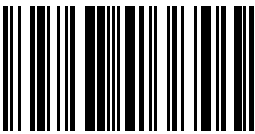
PDE4B: Suhasini AN, Wang L, Holder KN, et al. A phosphodiesterase 4B-dependent interplay between tumor cells and the microenvironment regulates angiogenesis in B-cell lymphoma. Leukemia. 2016;30(3):617-626. doi:10.1038/leu.2015.302.

PDE4D: Böttcher R, Dulla K, van Strijp D, et al. Human PDE4D isoform composition is deregulated in primary prostate cancer and indicative for disease progression and development of distant metastases. Oncotarget. 2016;7(43):70669-70684. doi:10.18632/oncotarget.1

PDE7B: Brooks MD, Jackson E, Warrington NM, et al. PDE7B Is a Novel, Prognostically Significant Mediator of Glioblastoma Growth Whose Expression Is Regulated by Endothelial Cells. Harrison JK, ed. PLoS ONE. 2014;9(9):e107397. doi:10.1371/journal.pone.0107397.

PDE8B: Molecular cloning and characterization of human PDE8B, a novel thyroid-specific isozyme of 3',5'-cyclic nucleotide phosphodiesterase. (PMID: 9784418) Hayashi M . Tanaka T Biochemical and biophysical research communications 1998 2 3 4 23 58 Autosomal-dominant striatal degeneration is caused by a mutation in the phosphodiesterase 8B gene. (PMID: 20085714) Appenzeller S . Kühlenbäumer G American journal of human genetics 2010 3 4 23 58 Abnormalities of cAMP signaling are present in adrenocorti

Name	Sample		
Age		Gender	F
		Report date	12/09/2025
Prescriber	Health insurance		



Sample

PDE9A: Lee DI, Zhu G, Sasaki T, et al. Phosphodiesterase 9A Controls Nitric-oxide Independent cGMP and Hypertrophic Heart Disease. Nature. 2015;519(7544):472-476. doi:10.1038/nature14332.

PDSS1: Julie Mollet, Irina Giurgea, Dimitri Schlemmer, Gustav Dallner, Dominique Chretien, Agnès Delahodde, Delphine Bacq, Pascale de Lonlay, Arnold Munnich, Agnès RötigJ Clin Invest. 2007 Mar 1; 117(3): 765–772. Published online 2007 Mar 1. doi: 10.1172/JCI29089PMCID: PMC1804361Ryoichi Saiki, Adam L. Lunceford, Yuchen Shi, Beth Marbois, Rhonda King, Justin Pachuski, Makoto Kawamukai, David L. Gasser, Catherine F. ClarkeAm J Physiol Renal Physiol. 2008 Nov; 295(5): F1535–F1544. Published online 20

PDSS2: Chungang Feng, Yu Gao, Ben Dorshorst, Chi Song, Xiaorong Gu, Qingyuan Li, Jinxiu Li, Tongxin Liu, Carl-Johan Rubin, Yiqiang Zhao, Yanqiang Wang, Jing Fei, Huifang Li, Kuanwei Chen, Hao Qu, Dingming Shu, Chris Ashwell, Yang Da, Leif Andersson, Xiaoxiang Hu, Ning LiPLoS Genet. 2014 Aug; 10(8): e1004576. Published online 2014 Aug 28. doi: 10.1371/journal.pgen.1004576PMCID: PMC4148213Mitsuro Kanda, Shuji Nomoto, Hisaharu Oya, Ryoji Hashimoto, Hideki Takami, Dai Shimizu, Fuminori Sonohara, Daisu

PECAM1: Sun X, Huang S, Wang X, Zhang X, Wang X. CD300A promotes tumor progression by PECAM1, ADCY7 and AKT pathway in acute myeloid leukemia. Oncotarget. 2018;9(44):27574-27584. doi:10.18632/oncotarget.24164.



Name Sample

Age

Gender

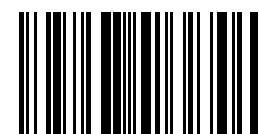
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Report date

12/09/2025

Prescriber

Health insurance

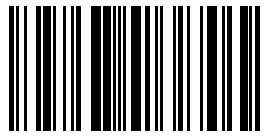


Sample

PEMT: Van der Veen JN, Lingrell S, Gao X, et al. Fenofibrate, but not ezetimibe, prevents fatty liver disease in mice lacking phosphatidylethanolamine N-methyltransferase. *Journal of Lipid Research*. 2017;58(4):656-667. doi:10.1194/jlr.M070631. AMPK Interactome Reveals New Function in Non-homologous End Joining DNA Repair. (PMID: 31900314) Chen Z ... Chen J *Molecular & cellular proteomics : MCP* 2020 3 Associations between folate and choline intake, homocysteine metabolism, and genetic polymorphism of MTHFR, BHMT and PEMT in healthy pregnant Polish women. (PMID: 31044529) Chmurzynska A ... Drews K *Nutrition & dietetics: the journal of the Dietitians Association of Australia* 2020 Total liver phosphatidylcholine content associates with non-alcoholic steatohepatitis and glycine N-methyltransferase expression. (PMID: 31199045) Männistö V ... Pihlajamäki J *Liver international : official journal of the International Association for the Study of the Liver* 2019 3 Single Nucleotide Polymorphisms in PEMT and MTHFR Genes are Associated with Omega 3 and 6 Fatty Acid Levels in the Red Blood Cells of Children with Obesity. (PMID: 31671528) Serafim V ... Niculescu MD *Nutrients* 2019 PEMT rs12325817 and PCYT1A rs7639752 polymorphisms are associated with betaine but not choline concentrations in pregnant women. (PMID: 30055775) Chmurzynska A ... Drews K *Nutrition research (New York, N.Y.)* 2018 3 Importance of polymorphic variants of phosphatidylethanolamine N-methyltransferase (PEMT) gene in the etiology of intrauterine fetal death in the Polish population. (PMID: 30321787) Seremak-Mrozikiewicz A ... Drews K *European journal of obstetrics, gynecology, and reproductive biology* 2018 Structure, expression profile and alternative processing of the human phosphatidylethanolamine N-methyltransferase (PEMT) gene. (PMID: 11420179) Shields DJ ... Vance DE *Biochimica et biophysica acta* 2001 3 4 21 Choline metabolic pathway gene polymorphisms and risk for Down syndrome: An association study in a population with folate-homocysteine metabolic impairment. (PMID: 27677362) Jaiswal SK ... Rai AK *European journal of clinical nutrition* 2017 3 Gene-by-environment interactions of the CLOCK, PEMT, and GHRELIN loci with average sleep duration in relation to obesity traits using a cohort of 643 New Zealand European children. (PMID: 28899534) Krishnan M ... Children of SCOPE Study Group *Sleep medicine* 2017 Identification of three novel cDNAs for human phosphatidylethanolamine N-methyltransferase and localization of the human gene on chromosome 17p11.2. (PMID: 9989271) Walkey CJ ... Vance DE *Biochimica et biophysica acta* 1999 2 3 4 21 Genetic variants in phosphatidylethanolamine N-methyltransferase and methylenetetrahydrofolate dehydrogenase influence biomarkers of choline metabolism when folate intake is restricted. (PMID: 19167960) Ivanov A ... Caudill MA *Journal of the American Dietetic Association* 2009 3 21 39 Genome-wide association study of biochemical traits in Korcula Island, Croatia. (PMID: 19260141) Zemunik T ... Rudan I *Croatian medical journal* 2009 3 21 39 Polymorphisms of microsomal triglyceride transfer protein gene and phosphatidylethanolamine N-methyltransferase gene in alcoholic and nonalcoholic fatty liver disease in Koreans. (PMID: 19262398) Jun DW ... Chae JD *European journal of gastroenterology & hepatology* 2009 3 21 39 Phosphatidylethanolamine N-methyltransferase (PEMT) gene expression is induced by estrogen in human and mouse primary hepatocytes. (PMID: 17456783) Resseguie M ... Zeisel SH *FASEB journal : official publication of the Federation of American Societies for Experimental Biology* 2007 Polymorphisms of microsomal triglyceride transfer protein gene and phosphatidylethanolamine N-methyltransferase gene in alcoholic and nonalcoholic fatty liver disease in Koreans. (PMID: 19262398) Jun DW ... Chae JD *European journal of gastroenterology & hepatology* 2009 3 21 39 The phosphatidylethanolamine N-methyltransferase gene V175M single nucleotide polymorphism confers the susceptibility to NASH in Japanese population. (PMID: 17391797) Dong H ... Onishi S *Journal of hepatology* 2007 3 21 39 Common genetic polymorphisms affect the human requirement for the nutrient choline. (PMID: 16816108) da Costa KA ... Zeisel SH *FASEB journal : official publication of the Federation of American Societies for Experimental Biology* 2006 3 21 39 Polymorphism of the PEMT gene and susceptibility to nonalcoholic fatty liver disease (NAFLD). (PMID: 16051693) Song J ... Zeisel SH *FASEB journal : official publication of the Federation of American Societies for Experimental Biology* 2005 3 21 39 Influence of polygenetic polymorphisms on the susceptibility to non-alcoholic fatty liver disease of Chinese people. (PMID: 20492333) Zhou YJ ... Huang HL *Journal of gastroenterology and hepatology* 2010

PER2: Yoo S-H, Kojima S, Shimomura K, et al. Period2 3'-UTR and microRNA-24 regulate circadian rhythms by repressing PERIOD2 protein accumulation. *Proceedings of the National Academy of Sciences of the United States of America*. 2017;114(42):E8855-E8864. doi:10.

PEX5L: Markus Kunze, Naila Malkani, Sebastian Maurer-Stroh, Christoph Wiesinger, Johannes A. Schmid, Johannes Berger *J Biol Chem*. 2015 Feb 20; 290(8): 4928–4940. Published online 2014 Dec 23. doi: 10.1074/jbc.M114.601575 PMID: PMC4335231 Tony A. Rodrigues, Inês S. Alencastre, Tânia Francisco, Pedro Brites, Marc Fransen, Cláudia P. Grou, Jorge E. Azevedo *Mol Cell Biol*. 2014 Aug; 34(15): 2917–2928. doi: 10.1128/MCB.01727-13 PMID: PMC4135580 Erika Celis-Aguilar, Luis Lassaletta, Miguel Torres-Martín.



PEX6: Gardner BM, Castanzo DT, Chowdhury S, et al. The peroxisomal AAA-ATPase Pex1/Pex6 unfolds substrates by processive threading. *Nature Communications*. 2018;9:135. doi:10.1038/s41467-017-02474-4.

PFKP: Lee J-H, Liu R, Li J, et al. Stabilization of phosphofructokinase 1 platelet isoform by AKT promotes tumorigenesis. *Nature Communications*. 2017;8:949. doi:10.1038/s41467-017-00906-9.

PHACTR1: Annina Kelloniemi, Zoltan Szabo, Raisa Serpi, Juha Näpänkangas, Pauli Ohukainen, Olli Tenhunen, Leena Kaikkonen, Elina Koivisto, Zsolt Bagyura, Risto Kerkelä, Margret Leosdottir, Thomas Hedner, Olle Melander, Heikki Ruskoaho, Jaana Rysä *PLoS One*. 2015; 10(6): e0130502. Published online 2015 Jun 22. doi: 10.1371/journal.pone.0130502 PMID: PMC4476650 Valérie-Anne Codina-Fauteux, Mélissa Beaudoin, Simon Lalonde, Ken Sin Lo, Guillaume Lettre *BMC Med Genet*. 2018; 19: 97. Published online 2018 Jun

PHF19: Ning F, Wang C, Niu S, Xu H, Xia K, Wang N. Transcription factor Phf19 positively regulates germinal center reactions that underlies its role in rheumatoid arthritis. *American Journal of Translational Research*. 2018;10(1):200-211.

PHGDH: Novel mutations in 3-phosphoglycerate dehydrogenase (PHGDH) are distributed throughout the protein and result in altered enzyme kinetics. (PMID: 19235232) Tabatabaie L . Klomp LW Human mutation 2009 3 4 23 58 V490M, a common mutation in 3-phosphoglycerate dehydrogenase deficiency, causes enzyme deficiency by decreasing the yield of mature enzyme. (PMID: 11751922) Pind S . Natowicz MR *The Journal of biological chemistry* 2002 3 4 23 58 Nucleotide sequence and differential expression of the hu

PHTF1: PHTF, a novel atypical homeobox gene on chromosome 1p13, is evolutionarily conserved. (PMID: 10395808) Raich N ... Beaupain D *Genomics* 1999 2 3 4 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE ... Uhl GR *Molecular medicine (Cambridge, Mass.)* 2010 3 39 PTPN22 Trp620 explains the association of chromosome 1p13 with type 1 diabetes and shows a statistical interaction with HLA class II genotypes. (PMID: 18305142) Smyth DJ ... Todd JA *Diabetes* 2008 3 39 Robust associations of four new chromosome regions from genome-wide analyses of type 1 diabetes. (PMID: 17554260) Todd JA ... Clayton DG *Nature genetics* 2007 3 39 The DNA sequence and biological annotation of human chromosome 1. (PMID: 16710414) Gregory SG ... Prigmore E *Nature* 2006

PHYHIP: Skvortsova YV, Kondratieva SA, Zinovyeva MV, Nikolaev LG, Azhikina TL, Gainetdinov IV. Intragenic Locus in Human PIWIL2 Gene Shares Promoter and Enhancer Functions. *Grosso M, ed. PLoS ONE*. 2016;11(6):e0156454. doi:10.1371/journal.pone.0156454.

PICALM: Stern, J. A., White, S. N., Lehmkuhl, L. B., Reina-Doreste, Y., Ferguson, J. L., Nascone-Yoder, N. M., Meurs, K. M. A single codon insertion in PICALM is associated with development of familial subvalvular aortic stenosis in Newfoundland dogs. *Hum. Genet*. 133: 1139-1148, 2014. [PubMed: 24898977, images, related citations] Treusch, S., Hamamichi, S., Goodman, J. L., Matlack, K. E. S., Chung, C. Y., Baru, V., Shulman, J. M., Parrado, A., Bevis, B. J., Valastyan, J. S., Han, H., Lindhagen-Per

PIK3CA: Nicole Bäumer, Jan Rehkämper, Neele Appel, Lisa Terheyden, Wolfgang Hartmann, Eva Wardelmann, Frank Buchholz, Carsten Müller-Tidow, Wolfgang E. Berdel, Sebastian Bäumer *PLoS One*. 2018; 13(7): e0200163. Published online 2018 Jul 12. doi: 10.1371/journal.pone.0200163 PMID: PMC6042707 Vanessa F. Merino, Soonweng Cho, Xiaohui Liang, Sunju Park, Kideok Jin, Qian Chen, Duoia Pan, Cynthia A. Zahnow, Alan R. Rein, Saraswati Sukumar *Mol Oncol*. 2017 May; 11(5): 552–566. Published online 2017 Apr 6. doi

PIP4K2A: Liao F, Yin D, Zhang Y, et al. Association Between PIP4K2A Polymorphisms and Acute Lymphoblastic Leukemia Susceptibility. *Wu. Y, ed. Medicine*. 2016;95(18):e3542. doi:10.1097/MD.0000000000003542.

PITX2: Waite M, Skidmore J, Billi A, Martin J, Martin D. GABAergic and glutamatergic identities of developing midbrain Pitx2 neurons. *Developmental dynamics?: an official publication of the American Association of Anatomists*. 2011;240(2):333-346. doi:10.1002/dvd

PKNOX2: Toivonen J, Kivioja T, Jolma A, Yin Y, Taipale J, Ukkonen E. Modular discovery of monomeric and dimeric transcription factor binding motifs for large data sets. *Nucleic Acids Research*. 2018;46(8):e44. doi:10.1093/nar/gky027.

Name Sample

Age

Gender

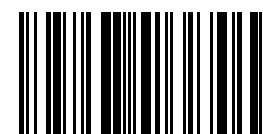
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

PLAU: Hayward CPM, Liang M, Tasneem S, et al. The duplication mutation of Quebec platelet disorder dysregulates PLA₂, but not C10orf55, selectively increasing production of normal PLA₂ transcripts by megakaryocytes but not granulocytes. Schulz C, ed. PLoS ONE.

PLCL2: Arismendi M, Giraud M, Ruzehaji N, et al. Identification of NF- κ B and PLCL2 as new susceptibility genes and highlights on a potential role of IRF8 through interferon signature modulation in systemic sclerosis. Arthritis Research & Therapy. 2015;17(1):71.

PLD3: Satoh J, Kino Y, Yamamoto Y, et al. PLD3 is accumulated on neuritic plaques in Alzheimer's disease brains. Alzheimer's Research & Therapy. 2014;6(9):70. doi:10.1186/s13195-014-0070-5.

PLD4: Chen W-C, Wang W-C, Okada Y, et al. rs2841277 (PLD4) is associated with susceptibility and rs4672495 is associated with disease activity in rheumatoid arthritis. Oncotarget. 2017;8(38):64180-64190. doi:10.18632/oncotarget.19419.

PLEKHG1: Wu Y, Luna MJ, Bonilla LS, Ryba NJP, Pickel JM. Characterization of knockin mice at the Rosa26, Tac1 and Plekhg1 loci generated by homologous recombination in oocytes. Hu W, ed. PLoS ONE. 2018;13(2):e0193129. doi:10.1371/journal.pone.0193129.

PLIN1: Isolation and chromosomal mapping of the human homolog of perilipin (PLIN), a rat adipose tissue-specific gene, by differential display method. (PMID: 9521880) Nishiu J ... Nakamura Y Genomics 1998 2 3 4 21 Perilipin deficiency and autosomal dominant partial lipodystrophy. (PMID: 21345103) Gandotra S ... Vigouroux C The New England journal of medicine 2011 3 4 70 Adoption of PERILIPIN as a unifying nomenclature for the mammalian PAT-family of intracellular lipid storage droplet proteins. (PMID: 19638644) Kimmel AR ... Londos C Journal of lipid research 2010 2 3 21 High prevalence of mutations in perilipin 1 in patients with precocious acute coronary syndrome. (PMID: 31877397) Bonello-Palot N ... Bonello L Atherosclerosis 2020 Perilipin overexpression in mice protects against diet-induced obesity. (PMID: 19797618) Miyoshi H ... Greenberg AS Journal of lipid research 2010 3 21 Association of lifestyle factors, polymorphisms in adiponectin, perilipin and hormone sensitive lipase, and clinical markers in Japanese males. (PMID: 20495294) Sone Y ... Otsuka Y Journal of nutritional science and vitaminology 2010

PLPP3: Silvia Aldi, Ljubica Perisic Matic, Gregory Hamm, Daniëlle van Keulen, Dennie Tempel, Kim Holmstrøm, Agnieszka Szwajda, Boye Schnack Nielsen, Valur Emilsson, Rima Ait-Belkacem, Mariette Lengquist, Gabrielle Paulsson-Berne, Per Eriksson, Jan H.N. Lindeman, Alain J. Gool, Jonathan Stauber, Ulf Hedin, Eva Hurt-Camejo Mol Ther Methods Clin Dev. 2018 Sep 21; 10: 17–28. Published online 2018 Jun 27. doi: 10.1016/j.omtm.2018.05.003 PMID: PMC6039967 Marco Busnelli, Stefano Manzini, Mika Hilvo.

PLTP: Audo R, Deckert V, Daien CI, et al. PhosphoLipid transfer protein (PLTP) exerts a direct pro-inflammatory effect on rheumatoid arthritis (RA) fibroblasts-like-synoviocytes (FLS) independently of its lipid transfer activity. Zhou H, ed. PLoS ONE. 2018;13(3)

PNMT: Lee SE, Oh E, Lee B, et al. Phenylethanolamine N-methyltransferase downregulation is associated with malignant pheochromocytoma/paraganglioma. Oncotarget. 2016;7(17):24141-24153. doi:10.18632/oncotarget.8234.

PNPLA3: BasuRay S, Smagris E, Cohen JC, Hobbs HH. The PNPLA3 variant associated with fatty liver disease (I148M) accumulates on lipid droplets by evading ubiquitylation. Hepatology (Baltimore, Md). 2017;66(4):1111-1124. doi:10.1002/hep.29273.

POC5: Shunmoogum A. Patten, Patricia Margaritte-Jeannin, Jean-Claude Bernard, Eudeline Alix, Audrey Labalme, Alicia Besson, Simon L. Girard, Khaled Fendri, Nicolas Fraisse, Bernard Biot, Coline Poizat, Amandine Campan-Fournier, Kariman Abelin-Genevois, Vincent Cunin, Charlotte Zaouter, Meijiang Liao, Raphaëlle Lamy, Gaetan Lesca, Rita Menassa, Charles Marcaillou, Melanie Letexier, Damien Sanlaville, Jerome Berard, Guy A. Rouleau, Françoise Clerget-Darpoux, Pierre Drapeau, Florina Moldovan.

POLG: Mutation of the linker region of the polymerase gamma-1 (POLG1) gene associated with progressive external ophthalmoplegia and Parkinsonism. (PMID: 17420318) Hudson G . Chinnery PF Archives of neurology 2007 3 4 23 45 58 Mitochondrial DNA polymerase gamma variants in idiopathic sporadic Parkinson disease. (PMID: 17846414) Luoma PT . Suomalainen A Neurology 2007 3 4 23 45 58 Clinical and genetic heterogeneity in progressive external ophthalmoplegia due to mutations in polymerase gamma. (PMID:

Name	Sample		
Age		Gender	F
		Report date	12/09/2025
Prescriber	Health insurance		



POLN: Takata K, Reh S, Yousefzadeh MJ, et al. Analysis of DNA polymerase γ function in meiotic recombination, immunoglobulin class-switching, and DNA damage tolerance. Cohen PE, ed. PLoS Genetics. 2017;13(6):e1006818. doi:10.1371/journal.pgen.1006818.

POMC: Chitoku Toda, Anna Santoro, Jung Dae Kim, Sabrina DianoAnnu Rev Physiol. Author manuscript; available in PMC 2017 Nov 3. Published in final edited form as: Annu Rev Physiol. 2017 Feb 10; 79: 209–236. doi: 10.1146/annurev-physiol-022516-034110PMCID: PMC5669621Anna Santoro, Michela Campolo, Chen Liu, Hiromi Sesaki, Rosaria Meli, Zhong-Wu Liu, Jung Dae Kim, Sabrina DianoCell Metab. Author manuscript; available in PMC 2018 Mar 7. Published in final edited form as: Cell Metab. 2017 Mar 7; 25(3): 6

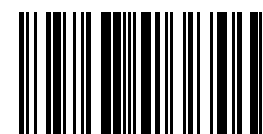
PON1: Aldonza MBD, Son YS, Sung H-J, et al. Paraoxonase-1 (PON1) induces metastatic potential and apoptosis escape via its antioxidative function in lung cancer cells. Oncotarget. 2017;8(26):42817-42835. doi:10.18632/oncotarget.17069.

PON2: Krüger M, Amort J, Wilgenbus P, et al. The anti-apoptotic PON2 protein is Wnt/ β -catenin-regulated and correlates with radiotherapy resistance in OSCC patients. Oncotarget. 2016;7(32):51082-51095. doi:10.18632/oncotarget.9013.

PPARA: Bocker CN, Yue J, Kim D, Qu A, Bonzo JA, Gonzalez FJ. Hepatocyte-specific PPARA expression exclusively promotes agonist-induced cell proliferation without influence from nonparenchymal cells. American Journal of Physiology - Gastrointestinal and Liver Ph

PPARD: PPARD polymorphism and circulating lipid levels connect with brain diseases in Han Chinese and suggest sex-dependent effects. Huang Y1, Nie S1, Zhou S1, Li K1, Sun J1, Zhao J1, Fei B1, Wang Z1, Ye H2, Hong Q2, Gao X3, Duan S4. Zuo X, Xu W, Xu M, et al. Metastasis regulation by PPARD expression in cancer cells. JCI Insight. 2017;2(1):e91419. doi:10.1172/jci.insight.91419.





PPARG: Dominant negative mutations in human PPARGgamma associated with severe insulin resistance, diabetes mellitus and hypertension. (PMID: 10622252) Barroso I ... O'Rahilly S Nature 1999 3 4 21 70 Association of the PPARGC1A gene polymorphism with diabetic nephropathy in an Asian Indian population (CURES-41). (PMID: 19900151) Gayathri SB ... Mohan V Metabolic syndrome and related disorders 2010 3 21 39 Relationship of five type 2 diabetes candidate gene polymorphisms to the age at diagnosis of diabetes in the Slovakian population. (PMID: 20437825) Kozarova M ... Tkac I Bratislavske lekarske listy 2010 3 21 39 PPARGgamma gene C161T substitution alters lipid profile in Chinese patients with coronary artery disease and type 2 diabetes mellitus. (PMID: 20334678) Wan J ... Roy S Cardiovascular diabetology 2010 3 21 39 PPARG and ADIPOQ gene polymorphisms increase type 2 diabetes mellitus risk in Asian Indian Sikhs: Pro12Ala still remains as the strongest predictor. (PMID: 19846176) Sanghera DK ... Kamboh IM Metabolism: clinical and experimental 2010 [The Expression of Genes Encoding ABCA1 and ABCG1 Transporters and PPAR γ , LXR β , and ROR α Transcriptional Factors in Subcutaneous and Visceral Adipose Tissue in Women with Metabolic Syndrome]. (PMID: 33566026) Panteleeva AA ... Miroshnikova VV Molekuliarnaia biologii 2021 3 The Emerging Role of COX-2, 15-LOX and PPAR γ in Metabolic Diseases and Cancer: An Introduction to Novel Multi-target Directed Ligands (MTDLs). (PMID: 32867639) Alaaeddine RA ... El-Yazbi AF Current medicinal chemistry 2021 3 A Transcriptional Regulatory Loop of Master Regulator Transcription Factors, PPARG, and Fatty Acid Synthesis Promotes Esophageal Adenocarcinoma. (PMID: 33402390) Ma S ... Lin DC Cancer research 2021 3 Estrogen receptor-associated receptor α and peroxisome proliferator-activated receptor γ in metabolism and disease (Review). (PMID: 33355368) Huang WY ... Sun PM Molecular medicine reports 2021 3 Effects of FTO and PPAR γ variants on intrauterine growth restriction in a Brazilian birth cohort. (PMID: 33729310) Barbieri MR ... Bettiol H Brazilian journal of medical and biological research = Revista brasileira de pesquisas medicas e biologicas 2021 Frequency of PPAR- γ , FTO and ABCC8 genetic variation in Pakistani cardiovascular smokers. (PMID: 32712935) Rehman K ... Akash MSH Environmental science and pollution research international 2020 3 ACSL1 affects Triglyceride Levels through the PPAR γ Pathway. (PMID: 32218693) Li T ... Meng F International journal of medical sciences 2020 Nuclear hormone receptors: Ancient 9aaTAD and evolutionally gained NCoA activation pathways. (PMID: 30468856) Piskacek M ... Knight A The Journal of steroid biochemistry and molecular biology 2019 4 LncRNA AC096664.3/PPAR- γ /ABCG1-dependent signal transduction pathway contributes to the regulation of cholesterol homeostasis. (PMID: 30938872) Xu BM ... Wang Q Journal of cellular biochemistry 2019 3 Interaction Between AGTR1 and PPAR γ Gene Polymorphisms on the Risk of Nonalcoholic Fatty Liver Disease. (PMID: 30793973) Zhu P ... Dong C Genetic testing and molecular biomarkers 2019 DHA-enriched fish oil upregulates cyclin-dependent kinase inhibitor 2A (P16INK) expression and downregulates telomerase activity without modulating effects of PPAR γ Pro12Ala polymorphism in type 2 diabetic patients: A randomized, double-blind, placebo-controlled clinical trial. (PMID: 28024882) Toupchian O ... Koohdani F Clinical nutrition (Edinburgh, Scotland) 2018 3 DJ-1 Alleviates Angiotensin II-Induced Endothelial Progenitor Cell Damage by Activating the PPAR γ /HO-1 Pathway. (PMID: 28600848) Han T ... Yang S Journal of cellular biochemistry 2018 3 Influence of expression of UCP3, PLIN1 and PPARG2 on the oxidation of substrates after hypocaloric dietary intervention. (PMID: 28651828) Cortes de Oliveira C ... Nonino CB Clinical nutrition (Edinburgh, Scotland) 2018 3 Diabetes mellitus, superoxide dismutase and peroxisome proliferator activated receptor gamma polymorphisms modify the outcome of end-stage renal disease patients of Han Chinese origin. (PMID: 27925431) Chao CT ... Yen CJ Nephrology (Carlton, Vic.) 2018

PPARGC1A: Zhu L, Huang Q, Xie Z, et al. PPARGC1A rs3736265 G>A polymorphism is associated with decreased risk of type 2 diabetes mellitus and fasting plasma glucose level. Oncotarget. 2017;8(23):37308-37320. doi:10.18632/oncotarget.16307.

PPARGC1B: Zhang S, Jiang J, Chen Z, et al. Relationship of PPARG, PPARGC1A, and PPARGC1B polymorphisms with susceptibility to hepatocellular carcinoma in an eastern Chinese Han population. OncoTargets and therapy. 2018;11:4651-4660. doi:10.2147/OTT.S168274.

PPCDC: Mechanistic studies on phosphopantothenoylcysteine decarboxylase: trapping of an enethiolate intermediate with a mechanism-based inactivating agent. (PMID: 15581364) Strauss E ... Begley TP Biochemistry 2004 3 4 23 54 The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. (PMID: 12975309) Clark HF ... Gray A Genome research 2003 2 3 4 54 Unusual space-group pseudosymmetry in crystals of human phosphopantothenoylcysteine decarboxylase. (PMID: 14501115) Manoj N ... Ealick SE Acta crystallographica. Section D, Biological crystallography 2003 3 4 23 54 Complete reconstitution of the human coenzyme A biosynthetic pathway via comparative genomics. (PMID: 11923312) Daugherty M ... Osterman A The Journal of biological chemistry 2002 2 3 4 54 Genome-wide meta-analysis identifies regions on 7p21 (AHR) and 15q24 (CYP1A2) as determinants of habitual caffeine consumption. (PMID: 21490707) Cornelis MC ... Caporaso NE PLoS genetics 2011

Name	Sample		
Age		Gender	F
		Report date	12/09/2025
Prescriber	Health insurance		



PPM1H: Cai M, Li L. Subtype identification from heterogeneous TCGA datasets on a genomic scale by multi-view clustering with enhanced consensus. BMC Medical Genomics. 2017;10(Suppl 4):75. doi:10.1186/s12920-017-0306-x.

PPM1K: Genetic determinant for amino acid metabolites and changes in body weight and insulin resistance in response to weight-loss diets: the Preventing Overweight Using Novel Dietary Strategies (POUNDS LOST) trial. Xu M1, Qi Q, Liang J, Bray GA, Hu FB, Sacks FM, Qi L. Structural and biochemical characterization of human mitochondrial branched-chain -ketoacid dehydrogenase phosphatase. Wynn RM et al. J. Biol. Chem. 2012 Mar;287(12):9178-9192 PMID: 22291014 Europe PMC, Pubmed

PPM1L: Gang Lu, Asuka Ota, Shuxun Ren, Sarah Franklin, Christoph D. Rau, Peipei Ping, Timothy F. Lane, Z. Hong Zhou, Karen Reue, Aldons J. Lusis, Thomas Vondrisk, Yibin Wang Mol Metab. 2013 Nov; 2(4): 405–416. Published online 2013 Aug 3. doi: 10.1016/j.molmet.2013.07.005PMCID: PMC3854994Yanqing Chen, Jun Zhu, Pek Yee Lum, Xia Yang, Shirley Pinto, Douglas J. MacNeil, Chunsheng Zhang, John Lamb, Stephen Edwards, Solveig K. Sieberts, Amy Leonardson, Lawrence W. Castellini, Susanna Wang, Marie-France

PPP1R3B: Li W-J, Yin R-X, Huang J-H, Bin Y, Chen W-X, Cao X-L. Association between the PPP1R3B polymorphisms and serum lipid traits, the risk of coronary artery disease and ischemic stroke in a southern Chinese Han population. Nutrition & Metabolism. 2018;15:27. d

PRDM2: Barbier E, Johnstone A, Khomtchouk B, et al. Dependence-induced increase of alcohol self-administration and compulsive drinking mediated by the histone methyltransferase PRDM2. Molecular psychiatry. 2017;22(12):1746-1758. doi:10.1038/mp.2016.131.

PRKCH: Pedros C, Canonigo-Balancio AJ, Kong K-F, Altman A. Requirement of Treg-intrinsic CTLA4/PKC? signaling pathway for suppressing tumor immunity. JCI Insight. 2017;2(23):e95692. doi:10.1172/jci.insight.95692.

PRMT7: Sung-Hun Lee, Tsai-Yu Chen, Shilpa S. Dhar, Bingnan Gu, Kaifu Chen, Young Zoon Kim, Wei Li, Min Gyu LeeNucleic Acids Res. 2016 Dec 15; 44(22): 10603–10618. Published online 2016 Sep 12. doi: 10.1093/nar/gkw788PMCID: PMC5159542You Feng, Ranjan Maity, Julian P. Whitelegge, Andrea Hadjikyriacou, Ziwei Li, Cecilia Zurita-Lopez, Qais Al-Hadid, Amander T. Clark, Mark T. Bedford, Jean-Yves Masson, Steven G. ClarkeJ Biol Chem. 2013 Dec 27; 288(52): 37010–37025. Published online 2013 Nov 18. doi: 10

PROC: Musia? R, Ocho?ska K, Proc A, et al. Veno-arterial extracorporeal membrane oxygenation as cardiogenic shock therapy support in adult patients after heart surgery. Kardiochirurgia i Torakochirurgia Polska = Polish Journal of Cardio-Thoracic Surgery. 2017;1

PROX1: Structure and chromosomal localization of the human homeobox gene Prox 1. Zinovieva RD et al. Genomics 1996 Aug;35(3):517-522 PMID: 8812486

PRRC2C: Biswas K, Wagner Mackenzie B, Waldvogel-Thurlow S, et al. Differentially Regulated Host Proteins Associated with Chronic Rhinosinusitis Are Correlated with the Sinonasal Microbiome. Frontiers in Cellular and Infection Microbiology. 2017;7:504. doi:10.3389





PSEN1: Pathway-based approaches to imaging genetics association studies: Wnt signaling, GSK3beta substrates and major depression. (PMID: 20219685) Inkster B ... Matthews PM NeuroImage 2010 3 39 Archaeal roots of intramembrane aspartyl protease siblings signal peptide peptidase and presenilin. (PMID: 32935885) Raut P ... Lieberman RL Proteins 2021 3 Neuroprotective effect of emodin against Alzheimer's disease via Nrf2 signaling in U251 cells and APP/PS1 mice. (PMID: 33300068) Li Z ... Fei X Molecular medicine reports 2021 3 Alzheimer's Disease Associated Presenilin 1 and 2 Genes Dysregulation in Neonatal Lymphocytes Following Perinatal Asphyxia. (PMID: 34067945) Tarkowska A ... Pluta R International journal of molecular sciences 2021 3 PSEN1 Compound Heterozygous Mutations Associated with Cerebral Amyloid Angiopathy and Cognitive Decline Phenotype. (PMID: 33918046) Palmieri I ... Cereda C International journal of molecular sciences 2021 A novel mutation in PSEN1 (p.T119I) in an Argentine family with early- and late-onset Alzheimer's disease. (PMID: 31153663) Itzcovich T ... Surace EI Neurobiology of aging 2020 3 70 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA Nature 2020 3 Systematic validation of variants of unknown significance in APP, PSEN1 and PSEN2. (PMID: 32087291) Hsu S ... Karch CM Neurobiology of disease 2020 Recognition of the amyloid precursor protein by human γ -secretase. (PMID: 30630874) Zhou R ... Shi Y Science (New York, N.Y.) 2019 Genetic screening of Alzheimer's disease genes in Iberian and African samples yields novel mutations in presenilins and APP. (PMID: 18667258) Guerreiro RJ ... Clarimón J Neurobiology of aging 2010 3 21 39 70 A novel presenilin-1 mutation (Leu85Pro) in early-onset Alzheimer disease with spastic paraparesis. (PMID: 15534188) Ataka S ... Miki T Archives of neurology 2004 3 4 21 70 A novel presenilin 1 mutation associated with Pick's disease but not beta-amyloid plaques. (PMID: 15122701) Dermaut B ... De Deyn PP Annals of neurology 2004 3 4 21 70 A novel presenilin 1 mutation (L174 M) in a large Cuban family with early onset Alzheimer disease. (PMID: 12484344) Bertoli Avella AM ... Heutink P Neurogenetics 2002 3 4 21 70 Molecular evidence of presenilin 1 mutation in familial early onset dementia. (PMID: 11920851) Matsubara-Tsutsui M ... Miki T American journal of medical genetics 2002

PSEN2: Giau VV, Pyun J-M, Bagyinszky E, An SSA, Kim S. A pathogenic PSEN2p.His169Asn mutation associated with early-onset Alzheimer's disease. Clinical Interventions in Aging. 2018;13:1321-1329. doi:10.2147/CIA.S170374.

PSMA4: Ma C, Gu C, Huo Y, Li X, Luo X-J. The integrated landscape of causal genes and pathways in schizophrenia. Translational Psychiatry. 2018;8:67. doi:10.1038/s41398-018-0114-x.

PSMA6: Kakumu T, Sato M, Goto D, et al. Identification of Proteasomal catalytic subunit PSMA6 as a therapeutic target for lung cancer. Cancer Science. 2017;108(4):732-743. doi:10.1111/cas.13185.

PSRC1: Xi D, Zhao J, Guo K, et al. Serum amyloid P component therapeutically attenuates atherosclerosis in mice via its effects on macrophages. Theranostics. 2018;8(12):3214-3223. doi:10.7150/thno.22704.

PTCSC2: Genetic predisposition to papillary thyroid carcinoma: involvement of FOXE1, TSHR, and a novel lincRNA gene, PTCSC2. (PMID: 25303483) He H . de la Chapelle A The Journal of clinical endocrinology and metabolism 2015 2 3 58 A meta-analysis of thyroid-related traits reveals novel loci and gender-specific differences in the regulation of thyroid function. (PMID: 23408906) Porcu E . Naitza S PLoS genetics 2013 2 3 58 MYH9 binds to lncRNA gene PTCSC2 and regulates FOXE1 in the 9q22 thyroid cancer

PTEN: Amit Gupta, Nicholas R. Leslie Biol Chem. 2016 Aug 26; 291(35): 18465–18473. Published online 2016 Jul 12. doi: 10.1074/jbc.M116.727750PMCID: PMC5000091Arman Javadi, Ravi K Deevi, Emma Evergren, Elodie Blondel-Tepaz, George S Baillie, Mark GH Scott, Frederick C CampbellLife. 2017; 6: e24578. Published online 2017 Jul 27. doi: 10.7554/eLife.24578PMCID: PMC5576923Xiaoxiao Wang, Xin Cao, Ruifang Sun, Charlene Tang, Alexandar Tzankov, Jun Zhang, Ganiraju C. Manyam, Min Xiao, Yi Miao, Kausar J

PTGS2: Vogel LK, Sæbø M, Høyer H, et al. Intestinal PTGS2 mRNA Levels, PTGS2Gene Polymorphisms, and Colorectal Carcinogenesis. Scheurer M, ed. PLoS ONE. 2014;9(8):e105254. doi:10.1371/journal.pone.0105254.

PTH: Shilpa Choudhary, Katherine Blackwell, Olga Voznesensky, Abhijit Deb Roy, Carol PilbeamBone. 2013 Sep; 56(1): 31–41. Published online 2013 Apr 29. doi: 10.1016/j.bone.2013.04.017PMCID: PMC4073290Yingben Xue, Yongjun Xiao, Jingning Liu, Andrew C. Karaplis, Martin R. Pollak, Edward M. Brown, Dengshun Miao, David GoltzmanAm J Physiol Endocrinol Metab. 2012 Apr 1; 302(7): E841–E851. Published online 2012 Jan 24. doi: 10.1152/ajpendo.00599.2011PMCID: PMC3330707Sihoon Lee, Michael Mannstadt, Jun



PTPN2: Florian Wiede, Jarrod A. Dudakov, Kun-Hui Lu, Garron T. Dodd, Tariq Butt, Dale I. Godfrey, Andreas Strasser, Richard L. Boyd, Tony Tiganis *J Exp Med.* 2017 Sep 4; 214(9): 2733–2758. doi: 10.1084/jem.20161903 PMCID: PMC5584121 Robert C. Sharp, Shazia A. Beg, Saleh A. Naser *Front Cell Infect Microbiol.* 2018; 8: 11. Published online 2018 Jan 25. doi: 10.3389/fcimb.2018.00011 PMCID: PMC5788942 Florian Wiede, Sock Hui Chew, Catherine van Vliet, Ingrid J. Poulton, Konstantinos Kyparissoudis.

PTPN22: Spalinger MR, Kasper S, Gottier C, et al. NLRP3 tyrosine phosphorylation is controlled by protein tyrosine phosphatase PTPN22. *The Journal of Clinical Investigation.* 2016;126(5):1783-1800. doi:10.1172/JCI83669.

PTPRD: Berenice Ortiz, Armida W. M. Fabius, Wei H. Wu, Alicia Pedraza, Cameron W. Brennan, Nikolaus Schultz, Kenneth L. Pitter, Jacqueline F. Bromberg, Jason T. Huse, Eric C. Holland, Timothy A. Chan *Proc Natl Acad Sci U S A.* 2014 Jun 3; 111(22): 8149–8154. Published online 2014 May 19. doi: 10.1073/pnas.1401952111 PMCID: PMC4050622 Noah D. Peyser, Yu Du, Hua Li, Vivian Lui, Xiao Xiao, Timothy A. Chan, Jennifer R. Grandis *PLoS One.* 2015; 10(8): e0135750. Published online 2015 Aug 12.

PTPRN2: Sengelaub CA, Navrazhina K, Ross JB, Halberg N, Tavazoie SF. PTPRN2 and PLC γ 1 promote metastatic breast cancer cell migration through PI(4,5)P₂-dependent actin remodeling. *The EMBO Journal.* 2016;35(1):62-76. doi:10.15252/embj.201591973.

PTPRS: Davis TB, Yang M, Schell MJ, et al. PTPRS Regulates Colorectal Cancer RAS Pathway Activity by Inactivating Erk and Preventing Its Nuclear Translocation. *Scientific Reports.* 2018;8:9296. doi:10.1038/s41598-018-27584-x.

PUS10: Multi-ethnic genome-wide association study of 21,000 cases and 95,000 controls identifies new risk loci for atopic dermatitis Lavinia Paternoster,^{#1,2} Marie Standl,^{#3} Johannes Waage,⁴ Hansjörg Baurecht,⁵ Melanie Hotze,⁵ David P Strachan,⁶ John A Curtin,⁷ Klaus Bønnelykke,⁴ Chao Tian,⁸ Atsushi Takahashi,⁹ Jorge Esparza-Gordillo,^{10,11} Alexessander Couto Alves,¹² Jacob P Thyssen,¹³ Herman T den Dekker,^{14,15,16} Manuel A Ferreira,¹⁷ Elisabeth Altmaier,^{18,19,20} Patrick MA Sleiman,^{21,22} Feng Li Xi

PVALB: Dipoppa M, Ranson A, Krumin M, Pachitariu M, Carandini M, Harris KD.

PYY: Variation at the NFATC2 locus increases the risk of thiazolidinedione-induced edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) study. (PMID: 20628086) Bailey SD . DREAM investigators *Diabetes care* 2010 33 43 56 Physiogenomic analysis of statin-treated patients: domain-specific counter effects within the ACACB gene on low-density lipoprotein cholesterol? (PMID: 20602615) Ruaño G . Wu AH *Pharmacogenomics* 2010 3 43 56 Association study of 182 candida

QPCT: Kehlen A, Haegele M, Böhme L, Cynis H, Hoffmann T, Demuth H-U. N-terminal pyroglutamate formation in CX3CL1 is essential for its full biologic activity. *Bioscience Reports.* 2017;37(4):BSR20170712. doi:10.1042/BSR20170712.

QPCTL: Weight-loss diets modify glucose-dependent insulinotropic polypeptide receptor rs2287019 genotype effects on changes in body weight, fasting glucose, and insulin resistance: the Preventing Overweight Using Novel Dietary Strategies trial. Qi Q1, Bray GA, Hu FB, Sacks FM, Qi L.

RAB11B: Zhixu Chen, Zezheng Liu, Yang Yang, Zhaoyin Zhu, Ridong Liang, Bin Huang, Di Wu, Lei Yang, Hai Lu, Dadi Jin, Qingchu Li *Oncotarget.* 2018 Jun 1; 9(42): 26770–26786. Published online 2018 Jan 13. doi: 10.18632/oncotarget.24247 PMCID: PMC6003561 Neil J. Grimsey, Luisa J. Coronel, Isabel Canto Cordova, JoAnn Trejo *J Biol Chem.* 2016 Jan 29; 291(5): 2223–2236. Published online 2015 Dec 3. doi: 10.1074/jbc.M115.702993 PMCID: PMC4732206 Albert S. Reger, Matthew P. Yang, Shizuyo Koide-Yoshida, Elaine Guo,

RAB17: Striz AC, Tuma PL. The GTP-bound and Sumoylated Form of the rab17 Small Molecular Weight GTPase Selectively Binds Syntaxin 2 in Polarized Hepatic WIF-B Cells. *The Journal of Biological Chemistry.* 2016;291(18):9721-9732. doi:10.1074/jbc.M116.723353.

RAB25: Mitra S, Montgomery JE, Kolar MJ, et al. Stapled peptide inhibitors of RAB25 target context-specific phenotypes in cancer. *Nature Communications.* 2017;8:660. doi:10.1038/s41467-017-00888-8.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



RARB: Association analysis of retinoic acid receptor beta (RARbeta) gene with high myopia in Chinese subjects. (PMID: 20508731) Ding Y . Zhou X Molecular vision 2010 3 23 45 58 Mouse and human retinoic acid receptor beta 2 promoters: sequence comparison and localization of retinoic acid responsiveness. (PMID: 1663808) Shen S . Kruijer W DNA sequence : the journal of DNA sequencing and mapping 1991 3 4 23 58 Gain-of-Function Mutations in RARB Cause Intellectual Disability with Progressive Motor Im

RASEF: Yang Z-K, Yang J-Y, Xu Z-Z, Yu W-H. DNA Methylation and Uveal Melanoma. Chinese Medical Journal. 2018;131(7):845-851. doi:10.4103/0366-6999.228229.

RASGRP1: Winter S, Martin E, Boutboul D, et al. Loss of RASGRP1 in humans impairs T-cell expansion leading to Epstein-Barr virus susceptibility. EMBO Molecular Medicine. 2018;10(2):188-199. doi:10.15252/emmm.201708292.

RBBP6: Xiao C, Wang Y, Zheng M, et al. RBBP6 increases radioresistance and serves as a therapeutic target for preoperative radiotherapy in colorectal cancer. Cancer Science. 2018;109(4):1075-1087. doi:10.1111/cas.13516.

RBFOX1: Kucherenko MM, Shcherbata HR. Stress-dependent miR-980 regulation of Rbfox1/A2bp1 promotes ribonucleoprotein granule formation and cell survival. Nature Communications. 2018;9:312. doi:10.1038/s41467-017-02757-w.

RBMS1: Leppek K, Stoecklin G. An optimized streptavidin-binding RNA aptamer for purification of ribonucleoprotein complexes identifies novel ARE-binding proteins. Nucleic Acids Research. 2014;42(2):e13. doi:10.1093/nar/gkt956.

REST: McLeod TCV, Lewis JH, Whelihan K, Bacon CEW. Rest and Return to Activity After Sport-Related Concussion: A Systematic Review of the Literature. Journal of Athletic Training. 2017;52(3):262-287. doi:10.4085/1052-6050-51.6.06.

RGS1: Caballero-Franco C, Kissler S. The autoimmunity-associated gene RGS1 affects the frequency of T follicular helper cells. Genes and immunity. 2016;17(4):228-238. doi:10.1038/gene.2016.16.

RGS2: Jie L, Owens EA, Plante LA, et al. RGS2 squelches vascular Gi/o and Gq signaling to modulate myogenic tone and promote uterine blood flow. Physiological Reports. 2016;4(2):e12692. doi:10.14814/phy2.12692.

RHOU: Sara Canovas Nunes, Martina Manzoni, Marco Pizzi, Elisa Mandato, Marilena Carrino, Laura Quotti Tubi, Renato Zambello, Fausto Adami, Andrea Visentin, Gregorio Barilà, Livio Trentin, Sabrina Manni, Antonino Neri, Gianpietro Semenzato, Francesco Piazza Blood Cancer J. 2018 Feb; 8(2): 20. Published online 2018 Feb 13. doi: 10.1038/s41408-018-0053-z PMID: PMC5811530 Anna E. Dart, Gary M. Box, William Court, Madeline E. Gale, John P. Brown, Sarah E. Pinder, Suzanne A. Eccles, Claire M. Wells.

RIC3: Puschmann A. New Genes Causing Hereditary Parkinson’s Disease or Parkinsonism. Current Neurology and Neuroscience Reports. 2017;17(9):66. doi:10.1007/s11910-017-0780-8.

RLN3: Calvez J, de Ávila C, Timofeeva E. Sex-specific effects of relaxin-3 on food intake and body weight gain. British Journal of Pharmacology. 2017;174(10):1049-1060. doi:10.1111/bph.13530.

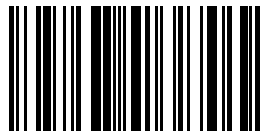
RNASEL: Nguyen-Dumont T, Teo ZL, Hammet F, et al. Is RNASEL:p.Glu265* a modifier of early-onset breast cancer risk for carriers of high-risk mutations BMC Cancer. 2018;18:165. doi:10.1186/s12885-018-4028-z.

RPGRIP1L: Wiegering A, Dildrop R, Kalfhues L, et al. Cell type-specific regulation of ciliary transition zone assembly in vertebrates. The EMBO Journal. 2018;37(10):e97791. doi:10.15252/embj.201797791.

RPL5: Fancello L, Kampen KR, Hofman IJF, Verbeeck J, Keersmaecker KD. The ribosomal protein gene RPL5 is a haploinsufficient tumor suppressor in multiple cancer types. Oncotarget. 2017;8(9):14462-14478. doi:10.18632/oncotarget.14895.

RPS6KB1: Chen B, Yang L, Zhang R, et al. Hyperphosphorylation of RPS6KB1, rather than overexpression, predicts worse prognosis in non-small cell lung cancer patients. Coleman WB, ed. PLoS ONE. 2017;12(8):e0182891. doi:10.1371/journal.pone.0182891.

RPSAP52: Panagopoulos I, Gorunova L, Brunetti M, et al. Genetic heterogeneity in leiomyomas of deep soft tissue. Oncotarget. 2017;8(30):48769-48781. doi:10.18632/oncotarget.17953.



RPTOR: Yang C, Tsaih S-W, Lemke A, Flister MJ, Thakar MS, Malarkannan S. mTORC1 and mTORC2 differentially promote natural killer cell development. Yokoyama WM, ed. eLife. 2018;7:e35619. doi:10.7554/eLife.35619.

RSU1: Human RSU1 is highly homologous to mouse Rsu-1 and localizes to human chromosome 10. (PMID: 8288261) Tsuda T ... Cutler ML Genomics 1993 2 3 4 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE ... Uhl GR Molecular medicine (Cambridge, Mass.) 2010 3 39 A scan of chromosome 10 identifies a novel locus showing strong association with late-onset Alzheimer disease. (PMID: 16385451) Grupe A ... Goate A American journal of human genetics 2006 3 39 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T ... Sugano S Nature genetics 2004 3 4 The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). (PMID: 15489334) Gerhard DS ... MGC Project Team Genome research 2004

RYR1: Increasing the number of diagnostic mutations in malignant hyperthermia. (PMID: 19191329) Levano S . Girard T Human mutation 2009 3 4 23 43 56 Identification of four novel mutations in the C-terminal membrane spanning domain of the ryanodine receptor 1: association with central core disease and alteration of calcium homeostasis. (PMID: 11741831) Tilgen N . Treves S Human molecular genetics 2001 3 4 23 43 56 The substitution of Arg for Gly2433 in the human skeletal muscle ryanodine receptor

RYR2: Gerhard MeissnerJ Gen Physiol. 2017 Dec 4; 149(12): 1065–1089. doi: 10.1085/jgp.201711878PMCID: PMC5715910Zhichao Xiao, Wenting Guo, Siobhan M. Wong King Yuen, Ruiwu Wang, Lin Zhang, Filip Van Petegem, S. R. Wayne ChenPLoS One. 2015; 10(9): e0139058. Published online 2015 Sep 25. doi: 10.1371/journal.pone.0139058PMCID: PMC4583508 Levent Kaya, Barbara Meissner, Maria Christine Riedl, Martin Muik, Christoph Schwarzer, Francesco Ferraguti, Bettina Sarg, Herbert Lindner, Rüdiger Schweigreiter.

S100P: Srinivasa R. Penumutchu, Ruey-Hwang Chou, Chin YuPLoS One. 2014; 9(8): e103947. Published online 2014 Aug 1. doi: 10.1371/journal.pone.0103947PMCID: PMC4118983 Maral E. A. Tabrizi, Tara L. Lancaster, Thamir M. Ismail, Athina Georgiadou, Ankana Ganguly, Jayna J. Mistry, Keqing Wang, Philip S. Rudland, Shakil Ahmad, Stephane R. GrossSci Rep. 2018; 8: 11488. Published online 2018 Jul 31. doi: 10.1038/s41598-018-29852-2PMCID: PMC6068119 Filip Prica, Tomasz Radon, Yuzhu Cheng, Tatjana Crnogorac-

SAMD12: Webb BT, Edwards AC, Wolen AR, et al. Molecular Genetic Influences on Normative and Problematic Alcohol Use in a Population-Based Sample of College Students. Frontiers in Genetics. 2017;8:30. doi:10.3389/fgene.2017.00030.

SCARB1: Identification, primary structure, and distribution of CLA-1, a novel member of the CD36/LIMPII gene family. (PMID: 7689561) Calvo D . Vega MA The Journal of biological chemistry 1993 2 3 4 23 56 Biological, clinical and population relevance of 95 loci for blood lipids. (PMID: 20686565) Teslovich TM . Kathiresan S Nature 2010 3 4 43 56 Association of polymorphisms in genes involved in lipoprotein metabolism with plasma concentrations of remnant lipoproteins and HDL subpopulations before and

SCCPDH: Identification of novel human genes evolutionarily conserved in Caenorhabditis elegans by comparative proteomics. (PMID: 10810093) Lai CH ... Lin W Genome research 2000 2 3 4 Genetic variants in nuclear-encoded mitochondrial genes influence AIDS progression. (PMID: 20877624) Hendrickson SL ... O'Brien SJ PloS one 2010 3 39 The DNA sequence and biological annotation of human chromosome 1. (PMID: 16710414) Gregory SG ... Prigmore E Nature 2006 3 4 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T ... Sugano S Nature genetics 2004 3 4 The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). (PMID: 15489334) Gerhard DS ... MGC Project Team Genome research 2004

SCG3: Sun M, Sun T, He Z, Xiong B. Identification of two novel biomarkers of rectal carcinoma progression and prognosis via co-expression network analysis. Oncotarget. 2017;8(41):69594-69609. doi:10.18632/oncotarget.18646.

SCN5A: Hu R-M, Tester DJ, Li R, et al. Mexiletine rescues a mixed biophysical phenotype of the cardiac sodium channel arising from the SCN5A mutation, N406K, found in LQT3 patients. Channels. 2018;12(1):176-186. doi:10.1080/19336950.2018.1475794.

SDC3: Chang BC-C, Hwang L-C, Huang W-H. Positive Association of Metabolic Syndrome with a Single Nucleotide Polymorphism of Syndecan-3 (rs2282440) in the Taiwanese Population. International Journal of Endocrinology. 2018;2018:9282598. doi:10.1155/2018/9282598.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



SDHAF4: Belt K, Van Aken O, Murcha M, Millar AH, Huang S. An Assembly Factor Promotes Assembly of Flavinated SDH1 into the Succinate Dehydrogenase Complex[OPEN]. Plant Physiology. 2018;177(4):1439-1452. doi:10.1104/pp.18.00320.

SEC16B: Molecular cloning and sequencing of the cDNA coding for a novel regucalcin gene promoter region-related protein in rat, mouse and human liver. (PMID: 11605020) Misawa H ... Yamaguchi M International journal of molecular medicine 2001 2 3 4 21 Sec16B is involved in the endoplasmic reticulum export of the peroxisomal membrane biogenesis factor peroxin 16 (Pex16) in mammalian cells. (PMID: 21768384) Yonekawa S ... Tani K Proceedings of the National Academy of Sciences of the United States of America 2011 2 3 4 Two mammalian Sec16 homologues have nonredundant functions in endoplasmic reticulum (ER) export and transitional ER organization. (PMID: 17192411) Bhattacharyya D ... Glick BS Molecular biology of the cell 2007 2 3 4 Characterization of human Sec16B: indications of specialized, non-redundant functions. (PMID: 22355596) Budnik A ... Stephens DJ Scientific reports 2011 3 4 TFG-1 function in protein secretion and oncogenesis. (PMID: 21478858) Witte K ... Audhya A Nature cell biology 2011 Hepatitis B Virus HBx Protein Mediates the Degradation of Host Restriction Factors through the Cullin 4 DDB1 E3 Ubiquitin Ligase Complex. (PMID: 32235678) Minor MM ... Slagle BL Cells 2020

SELE: Beaufils F, Cmiljanovic N, Cmiljanovic V, et al. 5-(4,6-Dimorpholino-1,3,5-triazin-2-yl)-4-(trifluoromethyl)pyridin-2-amine (PQR309), a Potent, Brain-Penetrant, Orally Bioavailable, Pan-Class I PI3K/mTOR Inhibitor as Clinical Candidate in Oncology. Journa

SELENBP1: Pol A, Renkema GH, Tangerman A, et al. Mutations in SELENBP1, encoding a novel human methanethiol oxidase, cause extra-oral halitosis. Nature genetics. 2018;50(1):120-129. doi:10.1038/s41588-017-0006-7.

SELENOF: Serum selenium and single-nucleotide polymorphisms in genes for selenoproteins: relationship to markers of oxidative stress in men from Auckland, New Zealand. Karunasinghe N1, Han DY, Zhu S, Yu J, Lange K, Duan H, Medhora R, Singh N, Kan J, Alzaher W, Chen B, Ko S, Triggs CM, Ferguson LR.

SELENON: Uma mutação no elemento de redefinição da selenocisteína SEPN1 (SRE) reduz a incorporação de selenocisteína e leva à miopatia relacionada à SEPN1. (PMID: 19067361) Maiti B. Howard MT Mutaç o humana 2009 3 4 23 58 Estresse oxidativo na miopatia relacionada à SEPN1: da fisiopatologia ao tratamento. (PMID: 19557870) Arbogast S. Ferreiro A Anais de neurologia 2009 3 4 23 58 A miopatia relacionada à desmina com inclus es semelhantes ao corpo de Mallory   causada por muta  es do gene da selenopro

SELENOP: Serum selenium and single-nucleotide polymorphisms in genes for selenoproteins: relationship to markers of oxidative stress in men from Auckland, New Zealand Nishi Karunasinghe,1 Dug Yeo Han,2 Shuotun Zhu,1 Jie Yu,2 Katja Lange,2 He Duan,1 Roxanne Medhora,2 Nabitha Singh,2 James Kan,2 Waseem Alzaher,2 Benson Chen,2 Sarah Ko,2 Christopher M. Triggs,3 and Lynnette R. Fergusoncorresponding author1,2

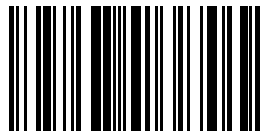
SEMA5A: Saxena S, Hayashi Y, Wu L, et al. Pathological and functional significance of Semaphorin-5A in pancreatic cancer progression and metastasis. Oncotarget. 2018;9(5):5931-5943. doi:10.18632/oncotarget.23644.

SERPINA12: Astafev AA, Patel SA, Kondratov RV. Calorie restriction effects on circadian rhythms in gene expression are sex dependent. Scientific Reports. 2017;7:9716. doi:10.1038/s41598-017-09289-9.

SERPINF1: Ziff JL, Crompton M, Powell HRF, et al. Mutations and altered expression of SERPINF1 in patients with fam lial otosclerosis. Human Molecular Genetics. 2016;25(12):2393-2403. doi:10.1093/hmg/ddw106.

SERPINI1: Tapocik JD, Ceniccola K, Mayo CL, et al. MicroRNAs Are Involved in the Development of Morphine-Induced Analgesic Tolerance and Regulate Functionally Relevant Changes in Serpini1. Frontiers in Molecular Neuroscience. 2016;9:20. doi:10.3389/fnmol.2016.00020





SETD7: Set9, a novel histone H3 methyltransferase that facilitates transcription by precluding histone tail modifications required for heterochromatin formation. (PMID: 11850410) Nishioka K ... Reinberg D Genes & development 2002 2 3 4 23 Purification and functional characterization of a histone H3-lysine 4-specific methyltransferase. (PMID: 11779497) Wang H ... Zhang Y Molecular cell 2001 2 3 4 23 SET domains of histone methyltransferases recognize ISWI-remodeled nucleosomal species. (PMID: 19752191) Krajewski WA ... Reese JC Molecular and cellular biology 2010 3 23 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE ... Uhl GR Molecular medicine (Cambridge, Mass.) 2010 3 41 Methylation-acetylation interplay activates p53 in response to DNA damage. (PMID: 17646389) Ivanov GS ... Barlev NA Molecular and cellular biology 2007

SEZ6L: Causevic M, Dominko K, Malnar M, et al. BACE1-cleavage of Sez6 and Sez6L is elevated in Niemann-Pick type C disease mouse brains. Ohno M, ed. PLoS ONE. 2018;13(7):e0200344. doi:10.1371/journal.pone.0200344.

SH2B1: Wang S, Cheng Y, Gao Y, et al. SH2B1 promotes epithelial-mesenchymal transition through the IRS1/?-catenin signaling axis in lung adenocarcinoma. Molecular Carcinogenesis. 2018;57(5):640-652. doi:10.1002/mc.22788.

SH2B3: Ge Z, Gu Y, Xiao L, et al. Co-existence of IL7R high and SH2B3 low expression distinguishes a novel high-risk acute lymphoblastic leukemia with Ikaros dysfunction. Oncotarget. 2016;7(29):46014-46027. doi:10.18632/oncotarget.10014.

SH3GL2: Zhu Y, Zhang X, Wang L, et al. Loss of SH3GL2 promotes the migration and invasion behaviours of glioblastoma cells through activating the STAT3/MMP2 signalling. Journal of Cellular and Molecular Medicine. 2017;21(11):2685-2694. doi:10.1111/jcmm.13184.

SHBG: Ayd?n B, Winters SJ. Sex Hormone-Binding Globulin in Children and Adolescents. Journal of Clinical Research in Pediatric Endocrinology. 2016;8(1):1-12. doi:10.4274/jcrpe.2764.

SHISA6: Remco V. Klaassen, Jasper Stroeder, Françoise Coussen, Anne-Sophie Hafner, Jennifer D. Petersen, Cedric Renancio, Leanne J. M. Schmitz, Elisabeth Normand, Johannes C. Lodder, Diana C. Rotaru, Priyanka Rao-Ruiz, Sabine Spijker, Huibert D. Mansvelder, Daniel Choquet, August B. Smit Nat Commun. 2016; 7: 10682. Published online 2016 Mar 2. doi: 10.1038/ncomms10682 PMID: PMC4778035 Moe Tokue, Kanako Ikami, Seiya Mizuno, Chiyo Takagi, Asuka Miyagi, Ritsuko Takada, Chiyo Noda, Yu Kitadate, Kenshiro

SHMT1: Changwei Dou, Qiuran Xu, Jie Liu, Yufeng Wang, Zhenyu Zhou, Weifeng Yao, Kai Jiang, Jian Cheng, Chengwu Zhang, Kangsheng Tu J Exp Clin Cancer Res. 2019; 38: 70. Published online 2019 Feb 12. doi: 10.1186/s13046-019-1067-5 PMID: PMC6373090 Elena V. Abarinov, Anna E. Beaudin, Martha S. Field, Cheryll A. Perry, Robert H. Allen, Sally P. Stabler, Patrick J. Stover J Nutr. 2013 Jul; 143(7): 1028-1035. Published online 2013 May 22. doi: 10.3945/jn.113.174417 PMID: PMC3681542 Donald D. Anderson, Colly

SHROOM3: Menon MC, Chuang PY, Li Z, et al. Intronic locus determines SHROOM3 expression and potentiates renal allograft fibrosis. The Journal of Clinical Investigation. 2015;125(1):208-221. doi:10.1172/JCI76902.

SIRT1: Choi SE, Kwon S, Seok S, et al. Obesity-Linked Phosphorylation of SIRT1 by Casein Kinase 2 Inhibits Its Nuclear Localization and Promotes Fatty Liver. Molecular and Cellular Biology. 2017;37(15):e00006-17. doi:10.1128/MCB.00006-17.

SIRT3: The human SIRT3 protein deacetylase is exclusively mitochondrial. (PMID: 18215119) Cooper HM ... Spelbrink JN The Biochemical journal 2008 2 3 4 Substrates and regulation mechanisms for the human mitochondrial sirtuins Sirt3 and Sirt5. (PMID: 18680753) Schlicker C ... Steegborn C Journal of molecular biology 2008 3 4 21 Reversible lysine acetylation controls the activity of the mitochondrial enzyme acetyl-CoA synthetase 2. (PMID: 16788062) Schwer B ... Verdin E Proceedings of the National Academy of Sciences of the United States of America 2006 3 4 21 A novel VNTR enhancer within the SIRT3 gene, a human homologue of SIR2, is associated with survival at oldest ages. (PMID: 15676284) Bellizzi D ... De Benedictis G Genomics 2005 3 21 39 The human silent information regulator (Sir)2 homologue hSIRT3 is a mitochondrial nicotinamide adenine dinucleotide-dependent deacetylase. (PMID: 12186850) Schwer B ... Verdin E The Journal of cell biology 2002

Name	Sample		
Age		Gender	F
		Report date	12/09/2025
Prescriber	Health insurance		



SIRT6: Ghosh S, Wong SK, Jiang Z, et al. Haploinsufficiency of Trp53 dramatically extends the lifespan of Sirt6-deficient mice. Fässler R, ed. eLife. 2018;7:e32127. doi:10.7554/eLife.32127.

SKIV2L: Aly HH, Suzuki J, Watashi K, et al. RNA Exosome Complex Regulates Stability of the Hepatitis B Virus X-mRNA Transcript in a Non-stop-mediated (NSD) RNA Quality Control Mechanism. The Journal of Biological Chemistry. 2016;291(31):15958-15974. doi:10.1074/j

SLC11A2: Divalent metal transporter 1 (DMT1) regulation by Ndfip1 prevents metal toxicity in human neurons. (PMID: 19706893) Howitt J . Tan SS Proceedings of the National Academy of Sciences of the United States of America 2009 3 4 23 58 Functional properties of multiple isoforms of human divalent metal-ion transporter 1 (DMT1). (PMID: 17109629) Mackenzie B . Hediger MA The Biochemical journal 2007 3 4 23 58 Identification of a human mutation of DMT1 in a patient with microcytic anemia and iron over

SLC17A1: Expressão de uma variante missense NPT1 / SLC17A1 humana que aumenta a exportação de urato. (PMID: 27906618) Sakiyama M... Shinomiya N Nucleosídeos, nucleotídeos e ácidos nucleicos 2016 3 4 Identificação de uma variante comum no gene TFR2 implicada na regulação fisiológica dos níveis de ferro sérico. (PMID: 21208937) Pichler I... Pramstaller PP Human molecular genetics 2011 3 41 Nova associação com o locus do gene da pró-proteína convertase PCSK7 revelada pela análise dos níveis do receptor de transferrina solúvel (sTfR). (PMID: 21149283) Oexle K... Meitinger T Human molecular genetics 2011

SLC19A1: Lau DT, Flemming CL, Gherardi S, et al. MYCN amplification confers enhanced folate dependence and methotrexate sensitivity in neuroblastoma. Oncotarget. 2015;6(17):15510-15523.

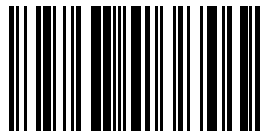
SLC19A2: Mutations in SLC19A2 cause thiamine-responsive megaloblastic anaemia associated with diabetes mellitus and deafness. (PMID: 10391221) Labay V . Cohen N Nature genetics 1999 2 3 4 23 56 Analysis of slc19a2, on 1q23.3 encoding a thiamine transporter as a candidate gene for type 2 diabetes mellitus in pima indians. (PMID: 11286512) Thameem F . Prochazka M Molecular genetics and metabolism 2001 3 23 43 56 The spectrum of mutations, including four novel ones, in the thiamine-responsive megalobla

SLC19A3: Identification and characterization of the human and mouse SLC19A3 gene: a novel member of the reduced folate family of micronutrient transporter genes. (PMID: 11136550) Eudy JD . Finnell RH Molecular genetics and metabolism 2000 2 3 4 23 56 Biotin-responsive basal ganglia disease maps to 2q36.3 and is due to mutations in SLC19A3. (PMID: 15871139) Zeng WQ . Gusella JF American journal of human genetics 2005 2 3 4 56 Generation and annotation of the DNA sequences of human chromosomes 2 and 4

SLC1A2: Jia Y-F, Choi Y, Ayers-Ringler JR, et al. Differential SLC1A2 Promoter Methylation in Bipolar Disorder With or Without Addiction. Frontiers in Cellular Neuroscience. 2017;11:217. doi:10.3389/fncel.2017.00217.

SLC1A3: Nielson CM, Liu C-T, Smith AV, et al. Novel Genetic Variants Associated With Increased Vertebral Volumetric BMD, Reduced Vertebral Fracture Risk, and Increased Expression of SLC1A3 and EPHB2. Journal of bone and mineral research?: the official journal of





SLC22A2: Human organic cation transporter (OCT1 and OCT2) gene polymorphisms and therapeutic effects of metformin. (PMID: 17111267) Shikata E ... Ieiri I Journal of human genetics 2007 3 4 21 39 Association of the SLC22A1, SLC22A2, and SLC22A3 genes encoding organic cation transporters with diabetic nephropathy and hypertension. (PMID: 20429798) Sallinen R ... Finnish Diabetic Nephropathy Study Group Annals of medicine 2010 3 21 39 Differential transport of platinum compounds by the human organic cation transporter hOCT2 (hSLC22A2). (PMID: 20067471) Burger H ... Wiemer EA British journal of pharmacology 2010 3 21 24 The effects of genetic polymorphisms in the organic cation transporters OCT1, OCT2, and OCT3 on the renal clearance of metformin. (PMID: 19536068) Tzvetkov MV ... Brockmöller J Clinical pharmacology and therapeutics 2009 3 21 39 Effect of genetic variation in the organic cation transporter 2 on the renal elimination of metformin. (PMID: 19483665) Chen Y ... Giacomini KM Pharmacogenetics and genomics 2009 Low HDL concentration in rs2048327-G carriers can predispose men to develop coronary heart disease: Tehran Cardiometabolic genetic study (TCGS). (PMID: 33581269) Najd Hassan Bonab L ... Daneshpour MS Gene 2021 3 Rosai-Dorfman Disease Displays a Unique Monocyte-Macrophage Phenotype Characterized by Expression of OCT2. (PMID: 33177341) Ravindran A ... Mayo Clinic Histiocytosis Working Group The American journal of surgical pathology 2021 The failure of DAC to induce OCT2 expression and its remission by hemoglobin-based nanocarriers under hypoxia in renal cell carcinoma. (PMID: 32206108) Chen L ... Yu L Theranostics 2020 3 Impact of the organic cation transporter 2 inhibitor cimetidine on the single-dose pharmacokinetics of the glucosylceramide synthase inhibitor lucerastat in healthy subjects. (PMID: 31836927) Boof ML ... Dingemans J European journal of clinical pharmacology 2020 3 Genetic variations of the SLC22A5 gene in the Chinese and Indian populations of Singapore. (PMID: 20208395) Toh DS ... Lee EJ Drug metabolism and pharmacokinetics 2010

SLC22A23: Ekizoglu S, Seven D, Ulutin T, Guliyev J, Buyru N. Investigation of the SLC22A23 gene in laryngeal squamous cell carcinoma. BMC Cancer. 2018;18:477. doi:10.1186/s12885-018-4381-y.

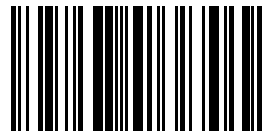
SLC22A5: Jaruskova M, Curik N, Hercog R, et al. Genotypes of SLC22A4 and SLC22A5 regulatory loci are predictive of the response of chronic myeloid leukemia patients to imatinib treatment. Journal of Experimental & Clinical Cancer Research?: CR. 2017;36:55. doi:10.

SLC23A1: Genetic variation at the SLC23A1 locus is associated with circulating concentrations of L-ascorbic acid (vitamin C): evidence from 5 independent studies with >15,000 participants. Timpson NJ1, Forouhi NG, Brion MJ, Harbord RM, Cook DG, Johnson P, McConnachie A, Morris RW, Rodriguez S, Luan J, Ebrahim S, Padmanabhan S, Watt G, Bruckdorfer KR, Wareham NJ, Whincup PH, Chanock S, Sattar N, Lawlor DA, Davey Smith G.Eck P, Kwon O, Chen S, Mian O, Levine M. The human sodium-dependent ascorbic acid

SLC25A19: The human mitochondrial deoxynucleotide carrier and its role in the toxicity of nucleoside antivirals. (PMID: 11226231) Dolce V . Walker JE Proceedings of the National Academy of Sciences of the United States of America 2001 2 3 4 23 56 SLC25A19 mutation as a cause of neuropathy and bilateral striatal necrosis. (PMID: 19798730) Spiegel R . Elpeleg O Annals of neurology 2009 2 3 4 56 The evidence that the DNC (SLC25A19) is not the mitochondrial deoxyribonucleotide carrier. (PMID: 18280798) K

SLC29A3: Alexandre Bolze, Avinash Abhyankar, Audrey V. Grant, Bhavi Patel, Ruchi Yadav, Minji Byun, Daniel Caillez, Jean-Francois Emile, Marçal Pastor-Anglada, Laurent Abel, Anne Puel, Rajgopal Govindarajan, Loic de Pontual, Jean-Laurent CasanovaPLoS One. 2012; 7(1): e29708. Published online 2012 Jan 4. doi: 10.1371/journal.pone.0029708PMCID: PMC3251605 Neil V. Morgan, Mark R. Morris, Hakan Cangul, Diane Gleeson, Anna Straatman-Iwanowska, Nicholas Davies, Stephen Keenan, Shanaz Pasha, Fatimah Rahman

SLC2A13: Jianjun Gao, Michael A Nalls, Min Shi, Bonnie R Joubert, Dena G Hernandez, Xuemei Huang, Albert Hollenbeck, Andrew B Singleton, Honglei ChenNeurobiol Aging. Author manuscript; available in PMC 2013 Oct 1.Published in final edited form as: Neurobiol Aging. 2012 Oct; 33(10): 2528.e1–2528.e6. Published online 2012 Jul 2. doi: 10.1016/j.neurobiolaging.2012.06.007PMCID: PMC3419385Nicole D. Dueker, Shengru Guo, Ashley Beecham, Liyong Wang, Susan H. Blanton, Marco R. Di Tullio, Tatjana Rundek, Ral



SLC2A14: Mandana Amir Shaghaghi, Haonan Zhouyao, Hongbin Tu, Hani El-Gabalawy, Gary H Crow, Mark Levine, Charles N Bernstein, Peter EckAm J Clin Nutr. 2017 Dec; 106(6): 1508–1513. Published online 2017 Sep 27. doi: 10.3945/ajcn.116.147603PMCID: PMC5698836Colin D Veal, Katherine E Reekie, Johnny C Lorentzen, Peter K Gregersen, Leonid Padyukov, Anthony J BrookesHum Mutat. 2014 Feb; 35(2): 248–256. Published online 2013 Dec 2. doi: 10.1002/humu.22471PMCID: PMC3995011Abhishek Nag, Cristina Venturini, Pi

SLC2A2: Yun Hak Kim, Dae Cheon Jeong, Kyoungjune Pak, Myoung-Eun Han, Ji-Young Kim, Liu Liangwen, Hyun Jin Kim, Tae Woo Kim, Tae Hwa Kim, Dong Woo Hyun, Sae-Ock OhOncotarget. 2017 Sep 15; 8(40): 68381–68392. Published online 2017 Aug 14. doi: 10.18632/oncotarget.20266PMCID: PMC5620264Fanxing Meng, Lei Zhu, Wenjie Huang, David M. Irwin, Shuyi ZhangSci Rep. 2016; 6: 29960. Published online 2016 Jul 21. doi: 10.1038/srep29960PMCID: PMC4954980Aurélien Michau, Ghislaine Guillemain, Alexandra Grosfeld, S

SLC2A4: Aruleba RT, Adekiya TA, Oyinloye BE, Kappo AP. Structural Studies of Predicted Ligand Binding Sites and Molecular Docking Analysis of Slc2a4 as a Therapeutic Target for the Treatment of Cancer. International Journal of Molecular Sciences. 2018;19(2):386.

SLC2A9: Ware EB, Riehle E, Smith JA, et al. SLC2A9 Genotype Is Associated with SLC2A9 Gene Expression and Urinary Uric Acid Concentration. Crawford DC, ed. PLoS ONE. 2015;10(7):e0128593. doi:10.1371/journal.pone.0128593.

SLC30A3: ZnT-3, a putative transporter of zinc into synaptic vesicles. (PMID: 8962159) Palmiter RD ... Findley SD Proceedings of the National Academy of Sciences of the United States of America 1996 2 3 4 23 54 Zinc transporter 2 (SLC30A2) can suppress the vesicular zinc defect of adaptor protein 3-depleted fibroblasts by promoting zinc accumulation in lysosomes. (PMID: 17349999) Falcón-Pérez JM ... Dell'Angelica EC Experimental cell research 2007 3 4 23 54 Loss of synaptic Zn²⁺ transporter function increases risk of febrile seizures. (PMID: 26647834) Hildebrand MS ... Reid CA Scientific reports 2015 3 4 54 SLC30A3 (ZnT3) oligomerization by dityrosine bonds regulates its subcellular localization and metal transport capacity. (PMID: 19521526) Salazar G ... Faundez V PloS one 2009 3 23 54 The zinc transporter ZnT3 interacts with AP-3 and it is preferentially targeted to a distinct synaptic vesicle subpopulation. (PMID: 14657250) Salazar G ... Faundez V Molecular biology of the cell 2004

SLC30A7: Syring KE, Boortz KA, Oeser JK, et al. Combined Deletion of Slc30a7 and Slc30a8 Unmasks a Critical Role for ZnT8 in Glucose-Stimulated Insulin Secretion. Endocrinology. 2016;157(12):4534-4541. doi:10.1210/en.2016-1573.

SLC30A8: A genome-wide association study identifies novel risk loci for type 2 diabetes. (PMID: 17293876) Sladek R ... Froguel P Nature 2007 3 4 39 70 Meta-analysis and functional effects of the SLC30A8 rs13266634 polymorphism on isolated human pancreatic islets. (PMID: 20138556) Cauchi S ... Marchetti P Molecular genetics and metabolism 2010 3 21 39 Autoantibodies to zinc transporter 8 and SLC30A8 genotype stratify type 1 diabetes risk. (PMID: 19590848) Achenbach P ... Ziegler AG Diabetologia 2009 3 21 39 SLC30A8 (ZnT8) Polymorphism is Associated with Young Age at Type 1 Diabetes Onset. (PMID: 18548167) Gohlke H ... Ziegler AG The review of diabetic studies : RDS 2008 3 21 39 Association between anti-ZnT8 autoantibody specificities and SLC30A8 Arg325Trp variant in Japanese patients with type 1 diabetes. (PMID: 18850084) Kawasaki E ... Eguchi K Diabetologia 2008

SLC35F3: Genetic implication of a novel thiamine transporter in human hypertension. (PMID: 24509276) Zhang K ... O'Connor DT Journal of the American College of Cardiology 2014 3 4 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE ... Uhl GR Molecular medicine (Cambridge, Mass.) 2010 3 39 Variation at the NFATC2 locus increases the risk of thiazolidinedione-induced edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) study. (PMID: 20628086) Bailey SD ... DREAM investigators Diabetes care 2010 3 39 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T ... Sugano S Nature genetics 2004 3 4 CCAT1/FABP5 promotes tumour progression through mediating fatty acid metabolism and stabilizing PI3K/AKT/mTOR signalling in lung adenocarcinoma. (PMID: 34431227) Chen J ... Chen B Journal of cellular and molecular medicine 2021

SLC38A8: Toral MA, Velez G, Boudreault K, et al. Structural modeling of a novel SLC38A8mutation that causes foveal hypoplasia. Molecular Genetics & Genomic Medicine. 2017;5(3):202-209. doi:10.1002/mgg3.266.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



SLC39A11: Wang Y, Huang Y, Zhang M, Zhang X, Tang X, Kang Y. Bioinformatic Analysis of the Possible Regulative Network of miR-30a/e in Cardiomyocytes 2 Days Post Myocardial Infarction . Acta Cardiologica Sinica.

SLC39A6: Wan X, Kong Z, Chu K, et al. Co-expression analysis revealed PTCH1-3'UTR promoted cell migration and invasion by activating miR-101-3p/SLC39A6 axis in non-small cell lung cancer: implicating the novel function of PTCH1. Oncotarget. 2018;9(4):4798-4813. do

SLC40A1: Wu J, Bao L, Zhang Z, Yi X. Nrf2 induces cisplatin resistance via suppressing the iron export related gene SLC40A1 in ovarian cancer cells. Oncotarget. 2017;8(55):93502-93515. doi:10.18632/oncotarget.19548.

SLC44A1: Ganz AB, Cohen VV, Swersky CC, et al. Genetic Variation in Choline-Metabolizing Enzymes Alters Choline Metabolism in Young Women Consuming Choline Intakes Meeting Current Recommendations. Bakovic M, ed. International Journal of Molecular Sciences. 2017;18

SLC45A2: Park J, Talukder A, Lim S, et al. SLC45A2: A Melanoma Antigen with High Tumor Selectivity and Reduced Potential for Autoimmune Toxicity. Cancer immunology research. 2017;5(8):618-629. doi:10.1158/2326-6066.CIR-17-0051.

SLC4A1: Park E, Phaymany V, Yi ES, Phangmanixay S, Cheong HI, Choi Y. Primary Autosomal Recessive Distal Renal Tubular Acidosis Caused by a Common Homozygous SLC4A1 Mutation in Two Lao Families. Journal of Korean Medical Science. 2018;33(13):e95. doi:10.3346/jkms

SLC52A2: Identification of receptors for pig endogenous retrovirus. (PMID: 12740431) Ericsson TA . Patience C Proceedings of the National Academy of Sciences of the United States of America 2003 2 3 4 56 SLC52A2 [p.P141T] and SLC52A3 [p.N21S] causing Brown-Vialetto-Van Laere Syndrome in an Indian patient: First genetically proven case with mutations in two riboflavin transporters. (PMID: 27702554) Udhayabanu T . Ashokkumar B Clinica chimica acta; international journal of clinical chemistry 2016 3 4

SLC52A3: Identification and functional characterization of rat riboflavin transporter 2. (PMID: 19122205) Yamamoto S . Yuasa H Journal of biochemistry 2009 2 3 4 56 The DNA sequence and comparative analysis of human chromosome 20. (PMID: 11780052) Deloukas P . Rogers J Nature 2001 2 3 4 56 SLC52A3 expression is activated by NF-?B p65/Rel-B and serves as a prognostic biomarker in esophageal cancer. (PMID: 29428966) Long L . Xu LY Cellular and molecular life sciences : CMLS 2018 3 4 56 Functional invo

SLC5A1: Rosa F, Busato S, Avaroma FC, et al. Transcriptional changes detected in fecal RNA of neonatal dairy calves undergoing a mild diarrhea are associated with inflammatory biomarkers. Loor JJ, ed. PLoS ONE. 2018;13(1):e0191599. doi:10.1371/journal.pone.019159

SLC64A: Lebois LAM, Wolff JD, Ressler KJ. Neuroimaging genetic approaches to Posttraumatic Stress Disorder. Experimental neurology. 2016;284(Pt B):141-152. doi:10.1016/j.expneurol.2016.04.019.

SLC6A11: Zuo L, Tan Y, Zhang X, et al. A new genome-wide association meta-analysis of alcohol dependence. Alcoholism, clinical and experimental research. 2015;39(8):1388-1395. doi:10.1111/acer.12786.

SLC6A2: Verschure DO, Baas F, van Eck-Smit BLF, Somsen GA, Verberne HJ. Polymorphism of SLC6A2 gene does not influence outcome of myocardial 123I-mIBG scintigraphy in patients with chronic heart failure. Journal of Nuclear Cardiology. 2018;25(3):900-906. doi:10.1

SLC6A3: Huang C-C, Kuo S-C, Yeh Y-W, et al. The SLC6A3 gene possibly affects susceptibility to late-onset alcohol dependence but not specific personality traits in a Han Chinese population. Lin ZC, ed. PLoS ONE. 2017;12(2):e0171170. doi:10.1371/journal.pone.01711

Name Sample

Age

Gender

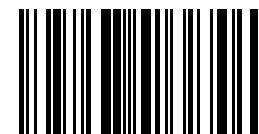
F

Report date

12/09/2025

Prescriber

Health insurance



Sample

SLC7A2: Dual proteome-scale networks reveal cell-specific remodeling of the human interactome. (PMID: 33961781) Huttlin EL ... Gygi SP Cell 2021 3 A proximity-dependent biotinylation map of a human cell. (PMID: 34079125) Go CD ... Gingras AC Nature 2021 3 SLC7A2 deficiency promotes hepatocellular carcinoma progression by enhancing recruitment of myeloid-derived suppressors cells. (PMID: 34108444) Xia S ... Liao J Cell death & disease 2021 The prognostic biomarker L-homoarginine is a substrate of the cationic amino acid transporters CAT1, CAT2A and CAT2B. (PMID: 28684763) Chafai A ... Maas R Scientific reports 2017 3 A chimera carrying the functional domain of the orphan protein SLC7A14 in the backbone of SLC7A2 mediates trans-stimulated arginine transport. (PMID: 22787143) Jaenecke I ... Closs EI The Journal of biological chemistry 2012 3 Regulation of arginine transport and metabolism by protein kinase Calpha in endothelial cells: stimulation of CAT2 transporters and arginase activity. (PMID: 20430034) Visigalli R ... Dall'Asta V Journal of molecular and cellular cardiology 2010 3 Polyamines Impair Immunity to Helicobacter pylori by Inhibiting L-Arginine Uptake Required for Nitric Oxide Production. (PMID: 20600019) Chaturvedi R ... Wilson KT Gastroenterology 2010 3 Rapamycin stimulates arginine influx through CAT2 transporters in human endothelial cells. (PMID: 17397797) Visigalli R ... Dall'Asta V Biochimica et biophysica acta 2007 21 System y+ arginine transport and NO production in peripheral blood mononuclear cells in pregnancy and preeclampsia. (PMID: 16344361) McCord N ... Redman C Hypertension (Dallas, Tex. : 1979) 2006 21 The arginine-arginase balance in asthma and lung inflammation. (PMID: 16458291) Zimmermann N ... Rothenberg ME European journal of pharmacology 2006 21 Macrophages require distinct arginine catabolism and transport systems for proliferation and for activation. (PMID: 16703566) Yeramian A ... Celada A European journal of immunology 2006 24 Arginine in asthma and lung inflammation. (PMID: 15465795) King NE ... Zimmermann N The Journal of nutrition 2004 21 CAT2 arginine transporter deficiency significantly reduces iNOS-mediated NO production in astrocytes. (PMID: 12675924) Manner CK ... MacLeod CL Journal of neurochemistry 2003 21 Coinduction of endothelial nitric oxide synthase and arginine recycling enzymes in aorta of diabetic rats. (PMID: 11384198) Oyadomari S ... Mori M Nitric oxide : biology and chemistry 2001 21 Physiological cyclic stretch directs L-arginine transport and metabolism to collagen synthesis in vascular smooth muscle. (PMID: 10973927) Durante W ... Schafer AI FASEB journal : official publication of the Federation of American Societies for Experimental Biology 2000 21 Overexpression of dominant negative mutant hepatocyte nuclear factor (HNF)-1alpha inhibits arginine-induced insulin secretion in MIN6 cells. (PMID: 10440133) Tanizawa Y ... Oka Y Diabetologia 1999

SLC7A9: Large rearrangements detected by MLPA, point mutations, and survey of the frequency of mutations within the SLC3A1 and SLC7A9 genes in a cohort of 172 cystinuric Italian patients. (PMID: 19782624) Bisceglia L . Zelante L Molecular genetics and metabolism 2010 3 4 23 43 56 A novel missense mutation of SLC7A9 frequent in Japanese cystinuria cases affecting the C-terminus of the transporter. (PMID: 16609684) Shigeta Y . Endou H Kidney international 2006 3 4 23 43 56 Mutation analysis of SLC7A9

SLC9A9: Zhang-James Y, Middleton FA, Sagvolden T, Faraone SV. Differential expression of SLC9A9 and interacting molecules in the hippocampus of rat models for attention-deficit/hyperactivity disorder. Developmental neuroscience. 2012;34(2-3):218-227. doi:10.1159/

SLCO1B3: Sissung TM, Ley AM, Strobe JD, et al. Differential Expression of OATP1B3 Mediates Unconjugated Testosterone Influx. Molecular cancer research?: MCR. 2017;15(8):1096-1105. doi:10.1158/1541-7786.MCR-16-0477.

SLX4: Balint A, Kim T, Gallo D, et al. Assembly of Slx4 signaling complexes behind DNA replication forks. The EMBO Journal. 2015;34(16):2182-2197. doi:10.15252/embj.201591190.

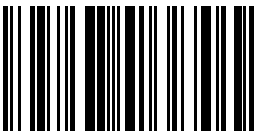
SMAD3: Tang PM-K, Zhou S, Meng X-M, et al. Smad3 promotes cancer progression by inhibiting E4BP4-mediated NK cell development. Nature Communications. 2017;8:14677. doi:10.1038/ncomms14677.

SMIM1: Christophersen MK, Jöud M, Ajore R, et al. SMIM1 variants rs1175550 and rs143702418 independently modulate Vel blood group antigen expression. Scientific Reports. 2017;7:40451. doi:10.1038/srep40451.

SMYD3: Kim J-M, Kim K, Schmidt T, et al. Cooperation between SMYD3 and PC4 drives a distinct transcriptional program in cancer cells. Nucleic Acids Research. 2015;43(18):8868-8883. doi:10.1093/nar/gkv874.

SNAP25: Weber P, Batoulis H, Rink KM, et al. Electrostatic anchoring precedes stable membrane attachment of SNAP25/SNAP23 to the plasma membrane. Brunger AT, ed. eLife. 2017;6:e19394. doi:10.7554/eLife.19394.

Name	Sample		
Age		Gender	F
		Report date	12/09/2025
Prescriber	Health insurance		



SNCA: Song J-X, Lu J-H, Liu L-F, et al. HMGB1 is involved in autophagy inhibition caused by SNCA/?-synuclein overexpression: A process modulated by the natural autophagy inducer corynoxine B. Autophagy. 2014;10(1):144-154. doi:10.4161/auto.26751.

SNRPN: Thompson LW, Morrison KD, Shirran SL, et al. Neurochondrin interacts with the SMN protein suggesting a novel mechanism for spinal muscular atrophy pathology. Journal of Cell Science. 2018;131(8):jcs211482. doi:10.1242/jcs.211482.

SOCS3: Polymorphisms near SOCS3 are associated with obesity and glucose homeostasis traits in Hispanic Americans from the Insulin Resistance Atherosclerosis Family Study. (PMID: 19083014) Talbert ME . Bowden DW Human genetics 2009 3 23 43 56 Common polymorphisms in SOCS3 are not associated with body weight, insulin sensitivity or lipid profile in normal female twins. (PMID: 16402267) Jamshidi Y . O'Dell SD Diabetologia 2006 3 23 43 56 A new high affinity binding site for suppressor of cytokine sig

SOD1: Mutations in Cu/Zn superoxide dismutase gene are associated with familial amyotrophic lateral sclerosis. (PMID: 8446170) Rosen DR ... Deng HX Nature 1993 2 3 4 39 69 Age and founder effect of SOD1 A4V mutation causing ALS. (PMID: 19176896) Saeed M ... Siddique T Neurology 2009 3 21 39 69 Sixteen novel mutations in the Cu/Zn superoxide dismutase gene in amyotrophic lateral sclerosis: a decade of discoveries, defects and disputes. (PMID: 14506936) Andersen PM ... Brown RH Amyotrophic lateral sclerosis and other motor neuron disorders : official publication of the World Federation of Neurology, Research Group on Motor Neuron Diseases 2003 3 4 21 69 Familial ALS is associated with mutations in all exons of SOD1: a novel mutation in exon 3 (Gly72Ser). (PMID: 9455977) Orrell RW ... deBellerocche JS Journal of the neurological sciences 1997 3 4 21 69 Screening of SOD1, FUS and TARDBP genes in patients with amyotrophic lateral sclerosis in central-southern China. (PMID: 27604643) Hou L ... Shen L Scientific reports 2016





SOD2: The polymorphism of manganese superoxide dismutase is associated with diabetic nephropathy in Japanese type 2 diabetic patients. (PMID: 12624725) Nomiyama T ... Kawamori R Journal of human genetics 2003 3 4 21 39 69 A functional polymorphism in the manganese superoxide dismutase gene and diabetic nephropathy. (PMID: 17192491) Möllsten A ... Dahlquist G Diabetes 2007 3 21 39 69 Genotype-activity relationship for Mn-superoxide dismutase, glutathione peroxidase 1 and catalase in humans. (PMID: 16538174) Bastaki M ... Holland N Pharmacogenetics and genomics 2006 3 21 39 69 The mitochondrial superoxide dismutase A16V polymorphism in the cardiomyopathy associated with hereditary haemochromatosis. (PMID: 15591282) Valenti L ... Fargion S Journal of medical genetics 2004 3 21 39 69 Missense polymorphisms in three oxidative-stress enzymes (GSTP1, SOD2, and GPX1) and dyskinesias in Russian psychiatric inpatients from Siberia. (PMID: 20041472) Al Hadithy AF ... Loonen AJ Human psychopharmacology 2010 The mitochondrial superoxide dismutase A16V polymorphism in the cardiomyopathy associated with hereditary haemochromatosis. (PMID: 15591282) Valenti L ... Fargion S Journal of medical genetics 2004 3 21 39 69 The Ala-9Val polymorphism in the mitochondrial targeting sequence (MTS) of the manganese superoxide dismutase gene is not associated with juvenile-onset asthma. (PMID: 15589819) Gurel A ... Elyas H Clinical biochemistry 2004 3 21 39 The -9Ala/-9Val polymorphism in the mitochondrial targeting sequence of the manganese superoxide dismutase gene (MnSOD) is associated with age among Hispanics with colorectal carcinoma. (PMID: 11836586) Stoeckelmacher J ... Lenz HJ Oncology reports 2002 3 21 39 Protein stability of mitochondrial superoxide dismutase SOD2 is regulated by USP36. (PMID: 21268071) Kim MS ... Baek KH Journal of cellular biochemistry 2011 3 4 Macrophages that survive hyperoxia exposure have higher superoxide dismutase activities in their mitochondria. (PMID: 20204772) Kokubo K ... Kobayashi H Advances in experimental medicine and biology 2010 Regulation of Anti-Apoptotic SOD2 and BIRC3 in Periodontal Cells and Tissues. (PMID: 33435582) Rath-Deschner B ... Damanaki A International journal of molecular sciences 2021 3 General Control of Amino Acid Synthesis 5-Like 1-Mediated Acetylation of Manganese Superoxide Dismutase Regulates Oxidative Stress in Diabetic Kidney Disease. (PMID: 33680286) Lv T ... Wan Q Oxidative medicine and cellular longevity 2021 3 LncRNA MAFG-AS1 affects the tumorigenesis of breast cancer cells via the miR-574-5p/SOD2 axis. (PMID: 33989902) Dai J ... Yan M Biochemical and biophysical research communications 2021 3 Rewiring of the Human Mitochondrial Interactome during Neuronal Reprogramming Reveals Regulators of the Respirasome and Neurogenesis. (PMID: 31536960) Moutaoufik MT ... Babu M iScience 2019 3 Associations Between Genetic Polymorphisms in the VEGFA, ACE, and SOD2 Genes and Susceptibility to Diabetic Nephropathy in the Han Chinese. (PMID: 31524543) Luo Y ... Peng H Genetic testing and molecular biomarkers 2019 3 USP36 protects proximal tubule cells from ischemic injury by stabilizing c-Myc and SOD2. (PMID: 30975468) Liu Q ... Wan Q Biochemical and biophysical research communications 2019 3 PARP1-LSD1 functional interplay controls transcription of SOD2 that protects human pro-inflammatory macrophages from death under an oxidative condition. (PMID: 30529301) Tokarz P ... Robaszkiewicz A Free radical biology & medicine 2019 3 miR-330-3p promotes lung cancer cells invasion, migration, and metastasis by directly targeting hSOD2b. (PMID: 30192404) Shen L ... Wang F Biotechnology and applied biochemistry 2019

SOD3: Manganese and extracellular superoxide dismutase polymorphisms and risk for asbestosis. (PMID: 19636420) Franko A ... Dolzan V Journal of biomedicine & biotechnology 2009 3 21 39 The structure of human extracellular copper-zinc superoxide dismutase at 1.7 Å resolution: insights into heparin and collagen binding. (PMID: 19289127) Antonyuk SV ... Hasnain SS Journal of molecular biology 2009 3 4 21 Genetic polymorphisms modifying oxidative stress are associated with disease activity in rheumatoid arthritis patients. (PMID: 19242068) Bohanec Grabar P ... Dolzan V Disease markers 2009 3 21 39 Extracellular superoxide dismutase haplotypes are associated with acute lung injury and mortality. (PMID: 18948423) Arcaroli JJ ... Crapo JD American journal of respiratory and critical care medicine 2009 3 21 39 Association of extracellular superoxide dismutase (SOD3) Ala40Thr gene polymorphism with pre-eclampsia complicated by severe fetal growth restriction. (PMID: 19108943) Rosta K ... Vér A European journal of obstetrics, gynecology, and reproductive biology 2009

SORBS1: Song L, Chang R, Dai C, et al. SORBS1 suppresses tumor metastasis and improves the sensitivity of cancer to chemotherapy drug. Oncotarget. 2017;8(6):9108-9122. doi:10.18632/oncotarget.12851.

SORL1: Thonberg H, Chiang H-H, Lilius L, et al. Identification and description of three families with familial Alzheimer disease that segregate variants in the SORL1 gene. Acta Neuropathologica Communications. 2017;5:43. doi:10.1186/s40478-017-0441-9.

SPAG16: Mehra S, Kapur S, Ganesh S. Association between a Tetranucleotide Repeat Polymorphism of SPAG16 Gene and Cataract in Male Children. Journal of Biomarkers. 2013;2013:810395. doi:10.1155/2013/810395.

Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



SPIRE2: Prediction of the coding sequences of unidentified human genes. XX. The complete sequences of 100 new cDNA clones from brain which code for large proteins in vitro. (PMID: 11347906) Nagase T . Ohara O DNA research : an international journal for rapid publication of reports on genes and genomes 2001 2 3 4 58 DNA damage induces nuclear actin filament assembly by Formin -2 and Spire-½ that promotes efficient DNA repair. [corrected]. (PMID: 26287480) Belin BJ . Mullins RD eLife 2015 3 4 58 Spir

SPOCK3: Wang L-Y, Cui J-J, Zhu T, et al. Biomarkers identified for prostate cancer patients through genome-scale screening. Oncotarget. 2017;8(54):92055-92063. doi:10.18632/oncotarget.20739.

SPSB4: Okumura F, Joo-Okumura A, Obara K, et al. Ubiquitin ligase SPSB4 diminishes cell repulsive responses mediated by EphB2. Chernoff J, ed. Molecular Biology of the Cell. 2017;28(24):3532-3541. doi:10.1091/mbc.E17-07-0450.

SSTR2: Arijit Bhowmik, Sayak Chakravarti, Aparajita Ghosh, Rajni Shaw, Suman Bhandary, Satyaranjan Bhattacharyya, Parimal C. Sen, Mrinal K. GhoshOncotarget. 2017 Sep 12; 8(39): 65339–65358. Published online 2017 Jun 27. doi: 10.18632/oncotarget.18689PMCID: PMC5630335Geetanjali Kharmate, Padmesh S Rajput, Yu-Chen Lin, Ujendra KumarCancer Cell Int. 2013; 13: 93. Published online 2013 Sep 23. doi: 10.1186/1475-2867-13-93PMCID: PMC3852783Sajad A War, Ujendra KumarJ Mol Signal. 2012; 7: 5. Published on

STAT3: Ethan L. Morgan, Christopher W. Wasson, Lucy Hanson, David Kealy, Ieisha Pentland, Victoria McGuire, Cinzia Scarpini, Nicholas Coleman, J. Simon C. Arthur, Joanna L. Parish, Sally Roberts, Andrew MacdonaldPLoS Pathog. 2018 Apr; 14(4): e1006975. Published online 2018 Apr 9. doi: 10.1371/journal.ppat.1006975PMCID: PMC5908086Michaela Galoczova, Philip Coates, Borivoj VojtesekCell Mol Biol Lett. 2018; 23: 12. Published online 2018 Mar 22. doi: 10.1186/s11658-018-0078-0PMCID: PMC5863838Teresa A.

STAT4: McWilliams IL, Rajbhandari R, Nozell S, Benveniste E, Harrington LE. STAT4 controls GM-CSF production by both Th1 and Th17 cells during EAE. Journal of Neuroinflammation. 2015;12:128. doi:10.1186/s12974-015-0351-3.

STAT5B: Oshida K, Vasani N, Waxman DJ, Corton JC. Disruption of STAT5b-Regulated Sexual Dimorphism of the Liver Transcriptome by Diverse Factors Is a Common Event. Singh PK, ed. PLoS ONE. 2016;11(3):e0148308. doi:10.1371/journal.pone.0148308.

STK39: Bazot Q, Paschos K, Allday MJ. Epstein-Barr Virus (EBV) Latent Protein EBNA3A Directly Targets and Silences the STK39 Gene in B Cells Infected by EBV. Sandri-Goldin RM, ed. Journal of Virology. 2018;92(7):e01918-17. doi:10.1128/JVI.01918-17.

STON2: Sun X, Zhang W, Li H, et al. Stonin 2 Overexpression is Correlated with Unfavorable Prognosis and Tumor Invasion in Epithelial Ovarian Cancer. International Journal of Molecular Sciences. 2017;18(8):1653. doi:10.3390/ijms18081653.

SUGP1: SF4 and SFRS14, two related putative splicing factors on human chromosome 19p13.11. (PMID: 12594045) Sampson ND . Hewitt JE Gene 2003 2 3 4 23 56 Biological, clinical and population relevance of 95 loci for blood lipids. (PMID: 20686565) Teslovich TM . Kathiresan S Nature 2010 3 43 56 Genetic variants influencing circulating lipid levels and risk of coronary artery disease. (PMID: 20864672) Waterworth DM . Sandhu MS Arteriosclerosis, thrombosis, and vascular biology 2010 3 43 56 Common vari

SUPT3H: A. Rasim Barutcu, Phillip W. L. Tai, Hai Wu, Jonathan A. R. Gordon, Troy W. Whitfield, Jason R. Dobson, Anthony N. Imbalzano, Jane B. Lian, André J. van Wijnen, Janet L. Stein, Gary S. SteinNucleic Acids Res. 2014 Sep 15; 42(16): 10360–10372. Published online 2014 Aug 12. doi: 10.1093/nar/gku712PMCID: PMC4176362Sarah J Rice, Guillaume Aubourg, Antony K Sorial, David Almarza, Maria Tselepi, David J Deehan, Louise N Reynard, John LoughlinHum Mol Genet. 2018 Oct 1; 27(19): 3464–3474. Published

SYK: Weis V, Königsberger S, Amler S, Wienands J, Kiefer F. Unperturbed Immune Function despite Mutation of C-Terminal Tyrosines in Syk Previously Implicated in Signaling and Activity Regulation. Molecular and Cellular Biology. 2017;37(21):e00216-17. doi:10.11

SYT1: Siao W, Wang P, Voigt B, Hussey PJ, Baluska F. Arabidopsis SYT1 maintains stability of cortical endoplasmic reticulum networks and VAP27-1-enriched endoplasmic reticulum–plasma membrane contact sites. Journal of Experimental Botany. 2016;67(21):6161-6171.



Name	Sample			
Age	Gender	F	Report date	12/09/2025
Prescriber	Health insurance			



TAGAP: Arshad M, Bhatti A, John P. Identification and in silico analysis of functional SNPs of human TAGAP protein: A comprehensive study. Zhang Y, ed. PLoS ONE. 2018;13(1):e0188143. doi:10.1371/journal.pone.0188143.

TAP2: Knox B, Wang Y, Rogers LJ, et al. A Functional SNP in the 3'-UTR of TAP2 Gene Interacts with MicroRNA Hsa-miR-1270 to Suppress the Gene Expression. Environmental and molecular mutagenesis. 2018;59(2):134-143. doi:10.1002/em.22159.

TAS1R2: Benford H, Bolborea M, Pollatzek E, et al. A sweet taste receptor-dependent mechanism of glucosensing in hypothalamic tanycytes. Glia. 2017;65(5):773-789. doi:10.1002/glia.23125.

TAS1R3: Sukumaran SK, Lewandowski BC, Qin Y, Kotha R, Bachmanov AA, Margolskee RF. Whole transcriptome profiling of taste bud cells. Scientific Reports. 2017;7:7595. doi:10.1038/s41598-017-07746-z.

TAS2R16: Thomas A, Sulli C, Davidson E, et al. The Bitter Taste Receptor TAS2R16 Achieves High Specificity and Accommodates Diverse Glycoside Ligands by using a Two-faced Binding Pocket. Scientific Reports. 2017;7:7753. doi:10.1038/s41598-017-07256-y.

TAS2R38: Choi J-H, Lee J, Choi IJ, Kim Y-W, Ryu KW, Kim J. Genetic Variation in the TAS2R38 Bitter Taste Receptor and Gastric Cancer Risk in Koreans. Scientific Reports. 2016;6:26904. doi:10.1038/srep26904.

TBC1D1: Hargett SR, Walker NN, Keller SR. Rab GAPs AS160 and Tbc1d1 play nonredundant roles in the regulation of glucose and energy homeostasis in mice. American Journal of Physiology - Endocrinology and Metabolism. 2016;310(4):E276-E288. doi:10.1152/ajpendo.0034

TBL2: TBL2, a novel transducin family member in the WBS deletion: characterization of the complete sequence, genomic structure, transcriptional variants and the mouse ortholog. (PMID: 10575226) Pérez Jurado LA ... Cruces J Cytogenetics and cell genetics 1999 2 3 4 22 Complete physical map of the common deletion region in Williams syndrome and identification and characterization of three novel genes. (PMID: 9860302) Meng X ... Keating MT Human genetics 1998 2 3 4 Large-scale genome-wide association studies in East Asians identify new genetic loci influencing metabolic traits. (PMID: 21909109) Kim YJ ... Cho YS Nature genetics 2011 3 40 Evaluating the discriminative power of multi-trait genetic risk scores for type 2 diabetes in a northern Swedish population. (PMID: 20571754) Fontaine-Bisson B ... Franks PW Diabetologia 2010 3 40 Fine-mapping in African Americans of 8 recently discovered genetic loci for plasma lipids: the Jackson Heart Study. (PMID: 20570916) Keebler ME ... Kathiresan S Circulation. Cardiovascular genetics 2010

TCF2: Quan X, Zhang L, Li Y, Liang C. TCF2 Attenuates FFA-Induced Damage in Islet β -Cells by Regulating Production of Insulin and ROS. International Journal of Molecular Sciences. 2014;15(8):13317-13332. doi:10.3390/ijms150813317.

TCF4: Kennedy AJ, Rahn EJ, Paulukaitis BS, et al. Tcf4 Regulates Synaptic Plasticity, DNA Methylation, and Memory Function. Cell reports. 2016;16(10):2666-2685. doi:10.1016/j.celrep.2016.08.004. Elucidating the genetic basis of social interaction and isolation. Day FR1, Ong KK1, Perry JRB2. MRC Epidemiology Unit, Box 285 Institute of Metabolic Science, Cambridge Biomedical Campus, University of Cambridge School of Clinical Medicine, Cambridge, CB2 0QQ, UK.



Name	Sample		
Age	Gender	F	Report date
Prescriber	Health insurance		



TCF7L2: Variant of transcription factor 7-like 2 (TCF7L2) gene confers risk of type 2 diabetes. (PMID: 16415884) Grant SF ... Stefansson K Nature genetics 2006 3 4 21 39 69 Relationship of five type 2 diabetes candidate gene polymorphisms to the age at diagnosis of diabetes in the Slovakian population. (PMID: 20437825) Kozarova M ... Tkac I Bratislavske lekarske listy 2010 3 21 39 Transcription factor 7-like 2-gene polymorphism is related to fasting C peptide in latent autoimmune diabetes in adults (LADA). (PMID: 19533015) Szepietowska B ... Szelachowska M Acta diabetologica 2010 3 21 39 Interactions between TCF7L2 genotype and growth hormone-induced changes in glucose homeostasis in small for gestational age children. (PMID: 19473183) de Kort SW ... Hokken-Koelega AC Clinical endocrinology 2010 3 21 39 TCF7L2 rs7903146-macronutrient interaction in obese individuals' responses to a 10-wk randomized hypoenergetic diet. (PMID: 20032493) Grau K ... Sørensen TI The American journal of clinical nutrition 2010 De novo variants in TCF7L2 are associated with a syndromic neurodevelopmental disorder. (PMID: 34003604) Dias C ... Rodan LH American journal of medical genetics. Part A 2021 3 69 Evidence of interaction between type 2 diabetes susceptibility genes and dietary fat intake for adiposity and glucose homeostasis-related phenotypes. (PMID: 20215779) Ruchat SM ... Pérusse L Journal of nutrigenetics and nutrigenomics 2009 3 39 A proximity-dependent biotinylation map of a human cell. (PMID: 34079125) Go CD ... Gingras AC Nature 2021 3 Dual proteome-scale networks reveal cell-specific remodeling of the human interactome. (PMID: 33961781) Huttlin EL ... Gygi SP Cell 2021 3 Association of Combined TCF7L2 and KCNQ1 Gene Polymorphisms with Diabetic Micro- and Macrovascular Complications in Type 2 Diabetes Mellitus. (PMID: 33752320) Rattanatham R ... Settasatian C Diabetes & metabolism journal 2021 Genetic susceptibility to type 2 diabetes is associated with reduced prostate cancer risk. (PMID: 20203524) Pierce BL ... Ahsan H Human heredity 2010 3 39 RIG-I regulates myeloid differentiation by promoting TRIM25-mediated ISGylation. (PMID: 32513696) Wu SF ... Chen S Proceedings of the National Academy of Sciences of the United States of America 2020 3 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA Nature 2020 3 T Cell Factor 4 Is Involved in Papillary Thyroid Carcinoma via Regulating Long Non-Coding RNA HCP5. (PMID: 33371788) Wang R ... Li G Technology in cancer research & treatment 2020 3 Molecular Characterization of the Oncogene BTF3 and Its Targets in Colorectal Cancer. (PMID: 33644029) Wang H ... Li X Frontiers in cell and developmental biology 2020

TCN1: Akkouh IA, Ueland T, Andreassen OA, et al. Expression of TCN1 in Blood is Negatively Associated with Verbal Declarative Memory Performance. Scientific Reports. 2018;8:12654. doi:10.1038/s41598-018-30898-5.

TCN2: Li P, Huang L, Zheng Y, et al. A missense mutation in TCN2 is associated with decreased risk for congenital heart defects and may increase cellular uptake of vitamin B12 via Megalin. Oncotarget. 2017;8(33):55216-55229. doi:10.18632/oncotarget.19377.

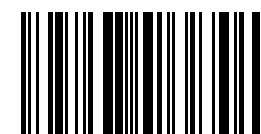
TDP2: Gómez-Herreros F, Zagnoli-Vieira G, Ntai I, et al. TDP2 suppresses chromosomal translocations induced by DNA topoisomerase II during gene transcription. Nature Communications. 2017;8:233. doi:10.1038/s41467-017-00307-y.

TERF2: Human telomeres contain two distinct Myb-related proteins, TRF1 and TRF2. (PMID: 9326950) Broccoli D ... de Lange T Nature genetics 1997 2 3 4 22 Arginine methylation regulates telomere length and stability. (PMID: 19596784) Mitchell TR ... Zhu XD Molecular and cellular biology 2009 3 4 22 Polymorphisms in telomere-associated genes, breast cancer susceptibility and prognosis. (PMID: 19766477) Varadi V ... Försti A European journal of cancer (Oxford, England : 1990) 2009 3 22 40 Polymorphisms in telomere maintenance genes and risk of lung cancer. (PMID: 19773453) Choi JE ... Park JY Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology 2009 3 22 40 Genetic variation in five genes important in telomere biology and risk for breast cancer. (PMID: 17848914) Savage SA ... Garcia-Closas M British journal of cancer 2007

TERT: Bordeira Gaspar T, Sá A, Lopes JM, Sobrinho-Simões M, Soares P, Vinagre J. Telomere Maintenance Mechanisms in Cancer. Genes. 2018;9(5):241. doi:10.3390/genes9050241.

TET1: Jing Wang, Dawei Zhang, Juan Du, Chi Zhou, Zhi Li, Xing Liu, Gang Ouyang, Wuhan XiaoNucleic Acids Res. 2017 Dec 15; 45(22): 12700–12714. Published online 2017 Sep 28. doi: 10.1093/nar/gkx869PMCID: PMC5727443Jianing Zhong, Xianfeng Li, Wanshi Cai, Yan Wang, Shanshan Dong, Jie Yang, Jian'an Zhang, Nana Wu, Yuanyuan Li, Fengbiao Mao, Cheng Zeng, Jinyu Wu, Xingzhi Xu, Zhong Sheng SunNucleic Acids Res. 2017 Jan 25; 45(2): 672–684. Published online 2016 Oct 12. doi: 10.1093/nar/gkw919PMCID: PMC53

TF: Ramsey J, Renzi EC, Arnold RJ, Trinidad JC, Mukhopadhyay S. Palmitoylation of Sindbis Virus TF Protein Regulates Its Plasma Membrane Localization and Subsequent Incorporation into Virions. Lyles DS, ed. Journal of Virology. 2017;91(3):e02000-16. doi:10.11



TFAP2B: Zainolabidin N, Kamath SP, Thanawalla AR, Chen AI. Distinct Activities of Tfap2A and Tfap2B in the Specification of GABAergic Interneurons in the Developing Cerebellum. *Frontiers in Molecular Neuroscience*. 2017;10:281. doi:10.3389/fnmol.2017.00281.

TFR2: Pellegrino RM, Boda E, Montarolo F, et al. Transferrin Receptor 2 Dependent Alterations of Brain Iron Metabolism Affect Anxiety Circuits in the Mouse. *Scientific Reports*. 2016;6:30725. doi:10.1038/srep30725.

TG: Brian C. Netzel, Stefan K. G. Grebe, B. Gisella Carranza Leon, M. Regina Castro, Penelope M. Clark, Andrew N. Hoofnagle, Carole A. Spencer, Adina F. Turcu, Alicia Algeciras-SchimnichJ Clin Endocrinol Metab. 2015 Aug; 100(8): E1074–E1083. Published online 2015 Jun 16. doi: 10.1210/jc.2015-1967PMCID: PMC4524993 Mijin Kim, Min Ji Jeon, Won Gu Kim, Jong Jin Lee, Jin-Sook Ryu, Eun-Jung Cho, Dae-Hyun Ko, Woosung Lee, Sail Chun, Won-Ki Min, Tae Yong Kim, Young Kee Shong, Won Bae Kim Endocrinol Me

TGFBR1: Liao M, Yang P, Wang F, et al. Smooth muscle cell-specific Tgfbr1 deficiency attenuates neointimal hyperplasia but promotes an undesired vascular phenotype for injured arteries. *Physiological Reports*. 2016;4(23):e13056. doi:10.14814/phy2.13056.

TGFBR3: Julian T. Schwartz, Simone Becker, Elpidoforos Sakkas, ?ukasz A. Wujak, Gero Niess, Jakob Usemann, Frank Reichenberger, Susanne Herold, István Vadász, Konstantin Mayer, Werner Seeger, Rory E. MortyJ Biol Chem. 2014 Feb 7; 289(6): 3262–3275. Published online 2013 Dec 17. doi: 10.1074/jbc.M113.541052PMCID: PMC3916529 Daniel M. DeLaughter, Cynthia R. Clark, Danos C. Christodoulou, Christine E. Seidman, H. Scott Baldwin, J. G. Seidman, Joey V. BarnettPLoS One. 2016; 11(8): e0159710.

THADA: Moraru A, Cakan-Akdogan G, Strassburger K, et al. THADA Regulates the Organismal Balance between Energy Storage and Heat Production. *Developmental Cell*. 2017;41(1):72-81.e6. doi:10.1016/j.devcel.2017.03.016.

THBD: Van Mens TE, Liang H-PH, Basu S, et al. Variable phenotypic penetrance of thrombosis in adult mice after tissue-selective and temporally controlled Thbd gene inactivation. *Blood Advances*. 2017;1(15):1148-1158. doi:10.1182/bloodadvances.2017005058.

THBS2: Wang X, Zhang L, Li H, Sun W, Zhang H, Lai M. THBS2 is a Potential Prognostic Biomarker in Colorectal Cancer. *Scientific Reports*. 2016;6:33366. doi:10.1038/srep33366.

TICAM1: Cutting edge: a novel Toll/IL-1 receptor domain-containing adapter that preferentially activates the IFN-beta promoter in the Toll-like receptor signaling. (PMID: 12471095) Yamamoto M ... Akira S Journal of immunology (Baltimore, Md. : 1950) 2002 2 3 4 21 Herpes simplex encephalitis in children with autosomal recessive and dominant TRIF deficiency. (PMID: 22105173) Sancho-Shimizu V ... Casanova JL The Journal of clinical investigation 2011 3 4 70 The human adaptor SARM negatively regulates adaptor protein TRIF-dependent Toll-like receptor signaling. (PMID: 16964262) Carty M ... Bowie AG Nature immunology 2006 3 4 21 Cutting Edge: NF-kappaB-activating kinase-associated protein 1 participates in TLR3/Toll-IL-1 homology domain-containing adapter molecule-1-mediated IFN regulatory factor 3 activation. (PMID: 15611223) Sasai M ... Seya T Journal of immunology (Baltimore, Md. : 1950) 2005 3 4 21 Mechanisms of the TRIF-induced interferon-stimulated response element and NF-kappaB activation and apoptosis pathways. (PMID: 14739303) Han KJ ... Shu HB The Journal of biological chemistry 2004

TKT: Xu IM-J, Lai RK-H, Lin S-H, et al. Transketolase counteracts oxidative stress to drive cancer development. *Proceedings of the National Academy of Sciences of the United States of America*. 2016;113(6):E725-E734. doi:10.1073/pnas.1508779113.

TLR2: Koymans KJ, Feitsma LJ, Brondijk THC, et al. Structural basis for inhibition of TLR2 by staphylococcal superantigen-like protein 3 (SSL3). *Proceedings of the National Academy of Sciences of the United States of America*. 2015;112(35):11018-11023. doi:10.10

TLR3: Zinngrebe J, Rieser E, Taraborrelli L, et al. LUBAC deficiency perturbs TLR3 signaling to cause immunodeficiency and autoinflammation. *The Journal of Experimental Medicine*. 2016;213(12):2671-2689. doi:10.1084/jem.20160041.

TLR4: Iotzova-Weiss G, Freiburger SN, Johansen P, et al. TLR4 as a negative regulator of keratinocyte proliferation. Brandner JM, ed. *PLoS ONE*. 2017;12(10):e0185668. doi:10.1371/journal.pone.0185668.



TM2D3: Jakobsdottir J, van der Lee SJ, Bis JC, et al. Rare Functional Variant in TM2D3 is Associated with Late-Onset Alzheimer's Disease. Haines JL, ed. PLoS Genetics. 2016;12(10):e1006327. doi:10.1371/journal.pgen.1006327.

TM9SF2: Pacheco AR, Lazarus JE, Sit B, et al. CRISPR Screen Reveals that EHEC's T3SS and Shiga Toxin Rely on Shared Host Factors for Infection. Rubin EJ, ed. mBio. 2018;9(3):e01003-18. doi:10.1128/mBio.01003-18.

TMEM18: Larder R, Sim MFM, Gulati P, et al. Obesity-associated gene TMEM18 has a role in the central control of appetite and body weight regulation. Proceedings of the National Academy of Sciences of the United States of America. 2017;114(35):9421-9426. doi:10.10

TMEM229B: Popova EY, Salzberg AC, Yang C, Zhang SS-M, Barnstable CJ. Identification and prediction of alternative transcription start sites that generate rod photoreceptor-specific transcripts from ubiquitously expressed genes. Lewin AS, ed. PLoS ONE. 2017;12(6):e0

TMEM241: Rodríguez A, Gonzalez L, Ko A, et al. Molecular characterization of the lipid GWAS signal on chromosome 18q11.2 implicates HNF4A-mediated regulation of the TMEM241 gene. Arteriosclerosis, thrombosis, and vascular biology. 2016;36(7):1350-1355. doi:10.1161

TMEM45B: Metri R, Mohan A, Nsengimana J, et al. Identification of a gene signature for discriminating metastatic from primary melanoma using a molecular interaction network approach. Scientific Reports. 2017;7:17314. doi:10.1038/s41598-017-17330-0.

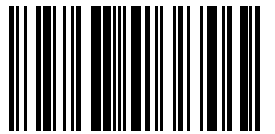
TMOD1: Cheng C, Nowak RB, Biswas SK, Lo W-K, FitzGerald PG, Fowler VM. Tropomodulin 1 Regulation of Actin Is Required for the Formation of Large Paddle Protrusions Between Mature Lens Fiber Cells. Investigative Ophthalmology & Visual Science. 2016;57(10):4084-40

TMPO: M J Davies, T F Slater Biochem J. 1986 Dec 15; 240(3): 789-795.PMCID: PMC1147488 Lin Zhang, Gan Wang, Shiwen Chen, Jun Ding, Shiming Ju, Heli Cao, Hengli TianWorld J Surg Oncol. 2016; 14: 267. Published online 2016 Oct 19. doi: 10.1186/s12957-016-1018-yPMCID: PMC5069786 Federico Abascal, Michael L. Tress, Alfonso Valencia Bioinformatics. 2015 Jul 15; 31(14): 2257-2261. Published online 2015 Mar 2. doi: 10.1093/bioinformatics/btv132PMCID: PMC4495291

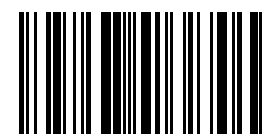
TMPRSS2: Identification of TMPRSS2 as a Susceptibility Gene for Severe 2009 Pandemic A(H1N1) Influenza and A(H7N9) Influenza. Cheng Z1, Zhou J2, To KK3, Chu H2, Li C1, Wang D1, Yang D1, Zheng S4, Hao K5, Bossé Y6, Obeidat M7, Brandsma CA8, Song YQ9, Chen Y4, Zheng BJ2, Li L4, Yuen KY3. Kim H, Datta A, Talwar S, Saleem SN, Mondal D, Abdel-Mageed AB. Estradiol-ER α signaling axis confers growth and migration of CRPC cells through TMPRSS2-ETV5 gene fusion. Oncotarget. 2017;8(38):62820-62833. doi:10.18632/oncotarget.11355.

TMPRSS6: Alicia R. Folgueras, Sandra Freitas-Rodríguez, Andrew J. Ramsay, Cecilia Garabaya, Francisco Rodríguez, Gloria Velasco, Carlos López-OtínNat Commun. 2018; 9: 1350. Published online 2018 Apr 10. doi: 10.1038/s41467-018-03853-1PMCID: PMC5893555 Sébastien P. Dion, François Béliveau, Antoine Désilets, Mariana Gabriela Ghinet, Richard Leduc J Cell Mol Med. 2018 Apr; 22(4): 2498-2509. Published online 2018 Feb 14. doi: 10.1111/jcmm.13562PMCID: PMC5867103Jana Frýdlová, Petr Píkrýl, Jaroslav Truks

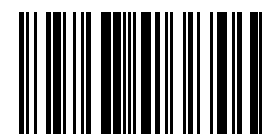
TNF: Association of tumor necrosis factor polymorphisms with asthma and serum total IgE. (PMID: 14681301) Shin HD ... Park CS Human molecular genetics 2004 3 21 39 69 Cytokine gene polymorphisms: association with psoriatic arthritis susceptibility and severity. (PMID: 12746914) Balding J ... FitzGerald O Arthritis and rheumatism 2003 3 4 39 69 A polymorphism that affects OCT-1 binding to the TNF promoter region is associated with severe malaria. (PMID: 10369255) Knight JC ... Kwiatkowski D Nature genetics 1999 3 4 39 69 Interleukin (IL)-1beta, IL-1 receptor antagonist, IL-6, IL-8, IL-10, and tumor necrosis factor alpha gene polymorphisms in patients with febrile seizures. (PMID: 20486195) Chou IC ... Tsai FJ Journal of clinical laboratory analysis 2010 3 21 39 Genetic susceptibility to different clinical forms of tuberculosis in the Peruvian population. (PMID: 20188863) Taype CA ... Shaw MA Infection, genetics and evolution : journal of molecular epidemiology and evolutionary genetics in infectious diseases 2010 3 21 39 Genetic variation in chromosomal translocation breakpoint and immune function genes and risk of non-Hodgkin lymphoma. (PMID: 20087644) Fernberg P ... Ekström Smedby K Cancer causes & control : CCC 2010 3 21 39 Association between polymorphisms in human tumor necrosis factor-alpha (-308) and -beta (252) genes and development of gestational diabetes mellitus. (PMID: 20189261) Montazeri S ... Radhakrishnan AK Diabetes research and clinical practice 2010 3 21 39 Tumor necrosis



factor alpha (-308), interleukin-6 (-174) and interleukin-10 (-1082) gene polymorphisms in polycystic ovary syndrome. (PMID: 20189706) Vural P ... Akgül C European journal of obstetrics, gynecology, and reproductive biology 2010 3 21 39 Genetic association of Toll-like-receptor 4 and tumor necrosis factor-alpha polymorphisms with Plasmodium falciparum blood infection levels. (PMID: 20307689) Basu M ... Sengupta S Infection, genetics and evolution : journal of molecular epidemiology and evolutionary genetics in infectious diseases 2010 3 21 39 The tumor necrosis factor polymorphism TNF (-308) is associated with susceptibility to meningococcal sepsis, but not with lethality. (PMID: 19242354) Read RC ... Wilson AG Critical care medicine 2009 3 21 39 The relation of adiponectin and tumor necrosis factor alpha levels between endothelial nitric oxide synthase, angiotensin-converting enzyme, transforming growth factor beta, and tumor necrosis factor alpha gene polymorphism in adrenal incidentalomas. (PMID: 19498318) Harman E ... Yilmaz C Journal of endocrinological investigation 2009 3 21 39 Association of IL10 and other immune response- and obesity-related genes with prostate cancer in CLUE II. (PMID: 19267370) Wang MH ... Platz EA The Prostate 2009 3 21 39 Analysis of inflammation- and atherosclerosis-related gene polymorphisms in branch retinal vein occlusion. (PMID: 19347053) Steinbrugger I ... Weger M Molecular vision 2009 3 21 39 Single nucleotide polymorphisms in TNF-alpha, TNFR2 gene and TNF-alpha production in Asian Indians. (PMID: 19811435) Gupta R ... Das SN Immunological investigations 2009 3 21 39 Genetic variants in immunoregulatory genes and risk for childhood lymphomas. (PMID: 19508433) Andrie E ... Petridou ET European journal of haematology 2009 3 21 39 Cytokine gene polymorphisms in Behçet's disease and their association with clinical and laboratory findings. (PMID: 19796538) Dilek K ... Oral HB Clinical and experimental rheumatology 2009 3 21 39 Effect of desensitization in solid organ transplant recipients depends on some cytokines genes polymorphism. (PMID: 19332120) Lobashevsky AL ... Turrentine MW Transplant immunology 2009 3 21 39 Interleukin-1 receptor antagonist and tumour necrosis factor-alpha gene polymorphisms in Turkish patients with allergic contact dermatitis. (PMID: 19706048) Ertam I ... Ozkinay F Contact dermatitis 2009 3 21 39 TNFA and IL10 gene polymorphisms are not associated with periodontitis in Brazilians. (PMID: 19771178) Moreira PR ... Dutra WO The open dentistry journal 2009 3 21 39 [Effect of TNF-alpha gene polymorphism on outcome of thalidomide-based regimens for multiple myeloma]. (PMID: 19954656) DU J ... Hou J Zhonghua xue ye xue za zhi = Zhonghua xueyexue zazhi 2009 3 21 39 Long-range linkage on chromosome 6p of VEGF, FKBP5, HLA and TNF alleles associated with transplant rejection. (PMID: 19233472) Chen Y ... Hutchinson IV Molecular immunology 2009 3 21 39 Association of polymorphisms in Tumor Necrosis Factor Alpha and Beta genes with increased risk for oral cancer. (PMID: 19528505) Yapijakis C ... Vairaktaris E Anticancer research 2009 3 21 39 Association between inflammatory gene polymorphisms and coronary artery disease in an Indian population. (PMID: 18157711) Banerjee I ... Ganesh S Journal of thrombosis and thrombolysis 2009 3 21 39 Association of gastric disease with polymorphisms in the inflammatory-related genes IL-1B, IL-1RN, IL-10, TNF and TLR4. (PMID: 19295440) Murphy G ... O'Sullivan M European journal of gastroenterology & hepatology 2009 3 21 39 The role of tumor necrosis factor (TNF)-alpha and TNF receptor polymorphisms in susceptibility to ankylosing spondylitis. (PMID: 19772798) Chatzikyriakidou A ... Drosos AA Clinical and experimental rheumatology 2009 3 21 39 Variation in inflammation-related genes and risk of incident nonfatal myocardial infarction or ischemic stroke. (PMID: 17981284) Bis JC ... Psaty BM Atherosclerosis 2008 3 21 39 Association of cystic fibrosis transmembrane conductance regulator (CFTR) mutation/variant/haplotype and tumor necrosis factor (TNF) promoter polymorphism in hyperlipidemic pancreatitis. (PMID: 17981921) Chang YT ... Wong JM Clinical chemistry 2008 3 21 39 Polymorphisms of the TNF, CD14, and HSPA1B genes in patients with acute alcohol-induced pancreatitis. (PMID: 18580445) Tukiainen E ... Repo H Pancreas 2008 3 21 39 TNF-alpha gene promoter polymorphism at nucleotide -308 and the inflammatory response and oxidative stress induced by cardiac surgery: role of heart failure and medical treatment. (PMID: 18450464) Galiñanes M ... Hadjinikolaou L European journal of cardio-thoracic surgery : official journal of the European Association for Cardio-thoracic Surgery 2008 3 21 39 New approach reveals CD28 and IFNG gene interaction in the susceptibility to cervical cancer. (PMID: 18337305) Guzman VB ... Morgun A Human molecular genetics 2008 3 21 39 Impact of genetic polymorphisms of leptin and TNF-alpha on rosiglitazone response in Chinese patients with type 2 diabetes. (PMID: 18438653) Liu HL ... Liu ZQ European journal of clinical pharmacology 2008 3 21 39 Association between the level of circulating bioactive tumor necrosis factor alpha and the tumor necrosis factor alpha gene polymorphism at -308 in patients with rheumatoid arthritis treated with a tumor necrosis factor alpha inhibitor. (PMID: 18438841) Marotte H ... Miossec P Arthritis and rheumatism 2008 3 21 39 TNF, IFNG, IL6, IL10 and TGFB1 gene polymorphisms in South and Southeast Brazil. (PMID: 18680515) Visentainer JE ... de Souza CA International journal of immunogenetics 2008 3 21 39 Cytokine Genes TNF, IL1A, IL1B, IL6, IL1RN and IL10, and childhood-onset mood disorders. (PMID: 18832862) Misener VL ... International Consortium for Childhood-Onset Mood Disorders Neuropsychobiology 2008 3 21 39 [Association of immune system gene polymorphisms with quantitative features which are pathogenetically important in chronic viral hepatitis]. (PMID: 18610832) Goncharova IA ... pyzurev VP Molekuliarnaia biologii 2008 3 21 39 IL10 polymorphisms are associated with airflow obstruction in severe alpha1-antitrypsin deficiency. (PMID: 17690329) Demeo DL ... Silverman EK American journal of respiratory cell and molecular biology 2008 3 21 39 Polymorphisms in cytokine genes and their association with acute



rejection and recurrence of hepatitis B in Chinese liver transplant recipients. (PMID: 18375254) Xie HY ... Zheng SS Archives of medical research 2008 3 21 39 Tumor necrosis factor-alpha and interleukin-10 gene promoter polymorphisms in Turkish rheumatoid arthritis patients. (PMID: 18427872) Ates O ... Topal-Sarikaya A Clinical rheumatology 2008 3 21 39 Interleukin-10 (IL10) and tumor necrosis factor alpha (TNF) gene polymorphisms in Parkinson's disease patients. (PMID: 18362084) Bialecka M ... Drożdżik M Parkinsonism & related disorders 2008 3 21 39 Interleukin-10 and tumor necrosis factor-alpha gene polymorphisms in tuberculosis. (PMID: 18071881) Ates O ... Topal-Sarikaya A Journal of clinical immunology 2008 3 21 39 A single tumour necrosis factor haplotype influences the response to adalimumab in rheumatoid arthritis. (PMID: 17673491) Miceli-Richard C ... Mariette X Annals of the rheumatic diseases 2008 3 21 39 Genetic polymorphisms of RANTES, IL1-A, MCP-1 and TNF-A genes in patients with prostate cancer. (PMID: 19099590) Sáenz-López P ... Ruiz-Cabello F BMC cancer 2008 3 21 39 [Association between susceptibility of endometriosis and the gene polymorphism of tumor necrosis factor]. (PMID: 18754435) Lu DH ... Deng L Zhonghua yi xue za zhi 2008 3 21 39 Inflammatory system gene polymorphism and the risk of stroke: a case-control study in an Indian population. (PMID: 18158110) Banerjee I ... Ganesh S Brain research bulletin 2008 3 21 39 Influence of functional interleukin 10/tumor necrosis factor-alpha polymorphisms on interferon-alpha, IL-10, and regulatory T cell population in patients with systemic lupus erythematosus receiving antimalarial treatment. (PMID: 18597405) López P ... Suárez A The Journal of rheumatology 2008 3 21 39 Association between LTA, TNF and AGER polymorphisms and late diabetic complications. (PMID: 18575614) Lindholm E ... Agardh CD PloS one 2008 3 21 39 Polymorphisms of tumor-necrosis factor-alpha - 308 and lymphotoxin-alpha + 250: possible modulation of susceptibility to apoptosis in chronic lymphocytic leukemia and non-Hodgkin lymphoma mononuclear cells. (PMID: 19021060) Jevtovic-Stoimenov T... Pavlović S Leukemia & lymphoma 2008 3 21 39 Genetic polymorphisms of adiponectin and tumor necrosis factor-alpha and nonalcoholic fatty liver disease in Chinese people. (PMID: 18565022) Wong VW ... Chan HL Journal of gastroenterology and hepatology 2008 3 21 39 Cytokine gene polymorphisms in heavy drinkers with and without decompensated liver disease: a case-control study. (PMID: 19086955) Gleeson D ... Duff GW The American journal of gastroenterology 2008 3 21 39 Combined effect of tumour necrosis factor-alpha and interleukin-13 polymorphisms on bronchial hyperresponsiveness in Korean children with asthma. (PMID: 18341619) Kim HB ... Hong SJ Clinical and experimental allergy : journal of the British Society for Allergy and Clinical Immunology 2008 3 21 39 Influence of cytokine gene polymorphisms on IgA nephropathy. (PMID: 18300111) Bantis C ... Ivens K Renal failure 2008 3 21 39 Cytokine gene polymorphism in kidney transplantation--impact of TGF-beta 1, TNF-alpha and IL-6 on graft outcome. (PMID: 18158121) Nikolova PN ... Naumova EJ Transplant immunology 2008 3 21 39 Epistatic interactions are critical to gene-association studies: PAI-1 and risk for mortality after burn injury. (PMID: 18182917) Barber RC ... Horton JW Journal of burn care & research : official publication of the American Burn Association 2008 3 21 39 TNF and sTNFR1/2 plasma levels in ALS patients. (PMID: 18083240) Cereda C ... Ceroni M Journal of neuroimmunology 2008 3 21 39 Associations between tumor necrosis factor-alpha and lymphotoxin-alpha polymorphisms and idiopathic recurrent miscarriage. (PMID: 18299433) Zammiti W ... Mahjoub T Reproduction (Cambridge, England) 2008 3 21 39 Polymorphisms of tumor necrosis factor-alpha, interleukin-10, cytochrome P450 3A5 and ABCB1 in Chinese liver transplant patients treated with immunosuppressant tacrolimus. (PMID: 17568575) Li D ... Zhang GL Clinica chimica acta; international journal of clinical chemistry 2007 3 21 39 Frequency distribution of cytokine gene polymorphisms in the healthy North Indian population. (PMID: 17257312) Kaur G ... Mehra NK Tissue antigens 2007 3 21 39 Effect of the 252A>G polymorphism of the lymphotoxin-alpha gene on inflammatory markers of response to cigarette smoking in Korean healthy men. (PMID: 17113059) Jang Y ... Lee JH Clinica chimica acta; international journal of clinical chemistry 2007 3 21 39 Genetic polymorphisms in immunoresponse genes TNFA, IL6, IL10, and TLR4 are associated with recurrent acute otitis media. (PMID: 17908769) Emonts M ... Sanders EA Pediatrics 2007 3 21 39 Association between human African trypanosomiasis and the IL6 gene in a Congolese population. (PMID: 16720107) Courtin D ... Garcia A Infection, genetics and evolution : journal of molecular epidemiology and evolutionary genetics in infectious diseases 2007 3 21 39 TNF polymorphism and bronchoalveolar lavage cell TNF-alpha levels in chronic beryllium disease and beryllium sensitization. (PMID: 17208287) Sato H ... Maier LA The Journal of allergy and clinical immunology 2007 3 21 39 IL-10 and IL-6 gene polymorphisms as potential host susceptibility factors in Brucellosis. (PMID: 17544674) Budak F ... Oral HB Cytokine 2007 3 21 39 Cytokine gene polymorphisms in Colombian patients with systemic lupus erythematosus. (PMID: 17711410) Guarnizo-Zuccardi P ... Vasquez G Tissue antigens 2007 3 21 39 Tumour necrosis factor alpha promoter polymorphisms and etanercept therapy in juvenile idiopathic arthritis. (PMID: 16951943) Schmeling H ... Horneff G Rheumatology international 2007 Dual proteome-scale networks reveal cell-specific remodeling of the human interactome. (PMID: 33961781) Huttlin EL ... Gygi SP Cell 2021 3 MIND bomb 2 prevents RIPK1 kinase activity-dependent and -independent apoptosis through ubiquitylation of cFLIPL. (PMID: 33469115) Nakabayashi O ... Nakano H Communications biology 2021 3 An NF-κB-responsive long noncoding RNA, PINT, regulates TNF-α gene transcription by scaffolding p65 and EZH2. (PMID: 34405442) Ye M ... Zhou R FASEB journal : official publication of the Federation of American Societies for



Experimental Biology 2021 3 Polymorphisms of the TNF, LTA, and TNFRSF1B genes are associated with onsets of menarche and menopause in US women of European ancestry. (PMID: 34595982) Dvornyk V ... Deng HW Annals of human biology 2021 3 Meta-analysis for association of TNFA-308(G > A) SNP with vitiligo susceptibility. (PMID: 34673212) Giri PS ... Dwivedi M Gene 2022

TNFRSF11B: Takao Hirai, Kenjiro Tanaka, Akifumi TogariBiol Open. 2015 Nov 15; 4(11): 1400–1409. Published online 2015 Oct 9. doi: 10.1242/bio.012617PMCID: PMC4728343Ju X Huang, L Wang, Ming H JiangJ Inflamm (Lond) 2010; 7: 50. Published online 2010 Sep 30. doi: 10.1186/1476-9255-7-50PMCID: PMC2959006Forough Saki, Zohreh Karamizadeh, Shiva Nasirabadi, Steven Mumm, William H. McAlister, Michael P. WhyteJ Bone Miner Res. Author manuscript; available in PMC 2014 Jun 1.Published in final edited form as: J

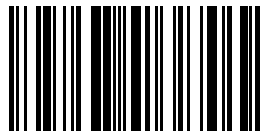
TNFRSF1B: Li H, Anderson SK. Association of TNFRSF1B Promoter Polymorphisms with Human Disease: Further Studies Examining T-Regulatory Cells Are Required. Frontiers in Immunology. 2018;9:443. doi:10.3389/fimmu.2018.00443.

TNFSF14: LIGHT/LTβR signaling regulates self-renewal and differentiation of hematopoietic and leukemia stem cells. (PMID: 33594067) Höpner SS ... Ochsenbein AF Nature communications 2021 3 Increased level of LIGHT/TNFSF14 is associated with survival in aneurysmal subarachnoid hemorrhage. (PMID: 33492677) Schranz D ... Csecsei P Acta neurologica Scandinavica 2021 Genomic characterization of LIGHT reveals linkage to an immune response locus on chromosome 19p13.3 and distinct isoforms generated by alternate splicing or proteolysis. (PMID: 11673523) Granger SW ... Ware CF Journal of immunology (Baltimore, Md. : 1950) 2001 3 4 21 LIGHT, a new member of the TNF superfamily, and lymphotoxin alpha are ligands for herpesvirus entry mediator. (PMID: 9462508) Mauri DN ... Ware CF Immunity 1998 2 3 4 Genetic risk and a primary role for cell-mediated immune mechanisms in multiple sclerosis. (PMID: 21833088) International Multiple Sclerosis Genetics Consortium ... Compston A Nature 2011 3 39 CXCR3 binding chemokine and TNFSF14 over expression in bladder urothelium of patients with ulcerative interstitial cystitis. (PMID: 20096889) Ogawa T ... Nishizawa O The Journal of urology 2010 3 21 An approach based on a genome-wide association study reveals candidate loci for narcolepsy. (PMID: 20677014) Shimada M ... Tokunaga K Human genetics 2010

TNFSF4: Manku H, Langefeld CD, Guerra SG, et al. Trans-Ancestral Studies Fine Map the SLE-Susceptibility Locus TNFSF4 . McCarthy MI, ed. PLoS Genetics. 2013;9(7):e1003554. doi:10.1371/journal.pgen.1003554.

TP53: Pathway-based approaches to imaging genetics association studies: Wnt signaling, GSK3beta substrates and major depression. (PMID: 20219685) Inkster B ... Matthews PM NeuroImage 2010 3 39 Effect of MDM2 SNP309 and p53 codon 72 polymorphisms on lung cancer risk and survival among non-smoking Chinese women in Singapore. (PMID: 20219101) Chua HW ... Seow A BMC cancer 2010 3 39 Critical role for Ser20 of human p53 in the negative regulation of p53 by Mdm2. (PMID: 10202144) Unger T ... Haupt Y The EMBO journal 1999 3 21 Multilevel proteomics reveals host perturbations by SARS-CoV-2 and SARS-CoV. (PMID: 33845483) Stukalov A ... Pichlmair A Nature 2021 3 Metformin induces apoptosis and inhibits migration by activating the AMPK/p53 axis and suppressing PI3K/AKT signaling in human cervical cancer cells. (PMID: 33236135) Chen YH ... Hsiao YH Mo The RNF20/40 complex regulates p53-dependent gene transcription and mRNA splicing. (PMID: 31152661) Wu C ... Yu X Journal of molecular cell biology 2020 3 Human colorectal cancer derived-MSCs promote tumor cells escape from senescence via P53/P21 pathway. (PMID: 31218648) Li G ... Feng Y Clinical & translational oncology : official publication of the Federation of Spanish Oncology Societies and of the National Cancer Institute of Mexico 2020 3 Tumor-derived CK1α mutations enhance MDMX inhibition of p53. (PMID: 31462704) Liu X ... Chen J Oncogene 2020 TP53 mutations predict disease control in metastatic colorectal cancer treated with cetuximab-based chemotherapy. (PMID: 19367287) Oden-Gangloff A ... Frebourg T British journal of cancer 2009 3 21 39 70 Germline TP53 mutations in BRCA1 and BRCA2 mutation-negative French Canadian breast cancer families. (PMID: 17541742) Arcand SL ... Tonin PN Breast cancer research and treatment 2008 3 21 39 70 BRCA1, BRCA2 and TP53 mutations in very early-onset breast cancer with associated risks to relatives. (PMID: 16644204) Lalloo F ... Evans DG European journal of cancer (Oxford, England : 1990) 2006 3 21 39 70 TP53, BRCA1, and BRCA2 tumor suppressor genes are not commonly mutated in survivors of Hodgkin's disease with second primary neoplasms. (PMID: 14673037) Nichols KE ... Diller L Journal of clinical oncology : official journal of the American Society of Clinical Oncology 2003 3 21 39 70 Hereditary TP53 codon 292 and somatic P16INK4A codon 94 mutations in a Li-Fraumeni syndrome family. (PMID: 10484981) Güran S ... Imirzalioglu N Cancer genetics and cytogenetics 1999

TPD52: Li J, Li Y, Liu H, Liu Y, Cui B. The four-transmembrane protein MAL2 and tumor protein D52 (TPD52) are highly expressed in colorectal cancer and correlated with poor prognosis. Ahmad A, ed. PLoS ONE. 2017;12(5):e0178515. doi:10.1371/journal.pone.0178515.



TPH1: Wigner P, Czarny P, Synowiec E, et al. Association between single nucleotide polymorphisms of TPH1 and TPH2 genes, and depressive disorders. *Journal of Cellular and Molecular Medicine*. 2018;22(3):1778-1791. doi:10.1111/jcmm.13459.

TPH2: Donner NC, Kubala KH, Hassell Jr. JE, et al. Two models of inescapable stress increase tph2 mRNA expression in the anxiety-related dorsomedial part of the dorsal raphe nucleus. *Neurobiology of Stress*. 2018;8:68-81. doi:10.1016/j.ynstr.2018.01.003.

TPK1: Lin C-J, Wu C-Y, Yu, S-J, Chen Y-L. Protein kinase A governs growth and virulence in *Candida tropicalis*. *Virulence*. 2018;9(1):331-347. doi:10.1080/21505594.2017.1414132.

TPO: Godlewska M, Krasuska W, Czarnocka B. Biochemical properties of thyroid peroxidase (TPO) expressed in human breast and mammary-derived cell lines. Pizzo SV, ed. *PLoS ONE*. 2018;13(3):e0193624. doi:10.1371/journal.pone.0193624.

TPTE2P1: Xu S, Zhan M, Wang J. Epithelial-to-mesenchymal transition in gallbladder cancer: from clinical evidence to cellular regulatory networks. *Cell Death Discovery*. 2017;3:17069-. doi:10.1038/cddiscovery.2017.69.

TRABD2B: Yamada Y, Sakuma J, Takeuchi I, et al. Identification of eight genetic variants as novel determinants of dyslipidemia in Japanese by exome-wide association studies. *Oncotarget*. 2017;8(24):38950-38961. doi:10.18632/oncotarget.17159.

TRAF1: Sanjeev Choudhary, Mridul Kalita, Ling Fang, Kershaw V. Patel, Bing Tian, Yingxin Zhao, Chukwudi B. Edeh, Allan R. Brasier *Biol Chem*. 2013 May 17; 288(20): 14612–14623. Published online 2013 Mar 29. doi: 10.1074/jbc.M113.464081PMCID: PMC3656313X-F Zhang, R Zhang, L Huang, P-X Wang, Y Zhang, D-S Jiang, L-H Zhu, S Tian, X-D Zhang, H Li *Cell Death Dis*. 2014 Oct; 5(10): e1467. Published online 2014 Oct 16. doi: 10.1038/cddis.2014.411PMCID: PMC4649517Chao Wang, Ann J. McPherson, R. Brad Jones, K

TRAF1/C5: Canhão H, Rodrigues AM, Santos MJ, et al. TRAF1/C5 but Not PTPRCVariants Are Potential Predictors of Rheumatoid Arthritis Response to Anti-Tumor Necrosis Factor Therapy. *BioMed Research International*. 2015;2015:490295. doi:10.1155/2015/490295.

TRAPPC9: Li C, Luo X, Zhao S, et al. COPI-TRAPPII activates Rab18 and regulates its lipid droplet association. *The EMBO Journal*. 2017;36(4):441-457. doi:10.15252/embj.201694866.

TREM2: Jay TR, von Saucken VE, Landreth GE. TREM2 in Neurodegenerative Diseases. *Molecular Neurodegeneration*. 2017;12:56. doi:10.1186/s13024-017-0197-5.

TRIB1: Léa Simoni, Virginia Delgado, Julie Ruer-Laventie, Delphine Bouis, Anne Soley, Vincent Heyer, Isabelle Robert, Vincent Gies, Thierry Martin, Anne-Sophie Korganow, Bernardo Reina-San-Martin, Pauline Soulas-Sprauel *Front Immunol*. 2018; 9: 373. Published online 2018 Mar 15. doi: 10.3389/fimmu.2018.00373PMCID: PMC5862796Sébastien Soubeyrand, Amy Martinuk, Paulina Lau, Ruth McPherson *PLoS One*. 2016; 11(3): e0152346. Published online 2016 Mar 28. doi: 10.1371/journal.pone.0152346PMCID: PMC4809572Sé

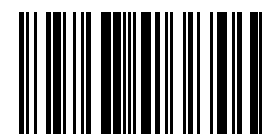
TRIB3: Aimé P, Sun X, Zareen N, et al. Trib3 Is Elevated in Parkinson's Disease and Mediates Death in Parkinson's Disease Models. *The Journal of Neuroscience*. 2015;35(30):10731-10749. doi:10.1523/JNEUROSCI.0614-15.2015.

TRIM29: Li Q, Lin L, Tong Y, et al. TRIM29 negatively controls antiviral immune response through targeting STING for degradation. *Cell Discovery*. 2018;4:13. doi:10.1038/s41421-018-0010-9.

TRIM66: Chen Y, Guo Y, Yang H, et al. TRIM66 overexpresssion contributes to osteosarcoma carcinogenesis and indicates poor survival outcome. *Oncotarget*. 2015;6(27):23708-23719.

TRPM6: Chubanov V, Ferioli S, Wisnowsky A, et al. Epithelial magnesium transport by TRPM6 is essential for prenatal development and adult survival. Lewis RS, ed. *eLife*. 2016;5:e20914. doi:10.7554/eLife.20914.

TRPM7: Abiria SA, Krapivinsky G, Sah R, et al. TRPM7 senses oxidative stress to release Zn2+ from unique intracellular vesicles. *Proceedings of the National Academy of Sciences of the United States of America*. 2017;114(30):E6079-E6088. doi:10.1073/pnas.170738011



TRPS1: Dana Elster, Marie Tollot, Karin Schlegelmilch, Alessandro Ori, Andreas Rosenwald, Erik Sahai, Björn von EyssNat Commun. 2018; 9: 3115. Published online 2018 Aug 6. doi: 10.1038/s41467-018-05370-7Correction in: Nat Commun. 2018; 9: 3781.PMCID: PMC6079100Anne-Sophie Bach, Danielle Derocq, Valérie Laurent-Matha, Philippe Montcourrier, Salwa Salwa Sebti, Béatrice Orsetti, Charles Theillet, Céline Gongora, Sophie Pattingre, Eva Ibing, Pascal Roger, Laetitia K. Linares, Thomas Reinheckel, Guilla

TSHR: Morshed SA, Ma R, Latif R, Davies TF. Biased signaling by thyroid-stimulating hormone receptor–specific antibodies determines thyrocyte survival in autoimmunity. Science signaling. 2018;11(514):eaah4120. doi:10.1126/scisignal.aah4120.

TTC39B: Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE . Uhl GR Molecular medicine (Cambridge, Mass.) 2010 3 43 56 Biological, clinical and population relevance of 95 loci for blood lipids. (PMID: 20686565) Teslovich TM . Kathiresan S Nature 2010 3 43 56 Evaluating the discriminative power of multi-trait genetic risk scores for type 2 diabetes in a northern Swedish population. (PMID: 20571754) Fontaine-Bisson

TTN: Yu-Huan Shih, Alexey V. Dvornikov, Ping Zhu, Xiao Ma, Maengjo Kim, Yonghe Ding, Xiaolei XuDevelopment. 2016 Dec 15; 143(24): 4713–4722. doi: 10.1242/dev.139246PMCID: PMC5201027Ali M. Tabish, Valerio Azzimato, Aris Alexiadis, Byambajav Buyandelger, Ralph KnöllBiophys Rev. 2017 Jun; 9(3): 207–223. Published online 2017 May 5. doi: 10.1007/s12551-017-0265-7PMCID: PMC5498329 Maria Franaszczyk, Przemyslaw Chmielewski, Grazyna Truszkowska, Piotr Stawinski, Ewa Michalak, Malgorzata Rydzanicz.

TTPA: Adivitiya, Khasa YP. The evolution of recombinant thrombolytics: Current status and future directions. Bioengineered. 2017;8(4):331-358. doi:10.1080/21655979.2016.1229718.

TTR: Offenburger S-L, Ho XY, Tachie-Menson T, Coakley S, Hilliard MA, Gartner A. 6-OHDA-induced dopaminergic neurodegeneration in Caenorhabditis elegans promoted by the engulfment pathway and inhibited by the transthyretin-related protein TTR-33. Caldwell K,

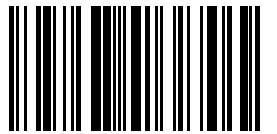
TTRAP: Vilotti S, Biagioli M, Foti R, et al. The PML nuclear bodies-associated protein TTRAP regulates ribosome biogenesis in nucleolar cavities upon Proteínasome inhibition. Cell Death and Differentiation. 2012;19(3):488-500. doi:10.1038/cdd.2011.118.

TUB: Von Loeffelholz O, Venables NA, Drummond DR, Katsuki M, Cross R, Moores CA. Nucleotide- and Mal3-dependent changes in fission yeast microtubules suggest a structural plasticity view of dynamics. Nature Communications. 2017;8:2110. doi:10.1038/s41467-017-0

TWIST1: Rajendra P. Gajula, Sivarajan T. Chettiar, Russell D. Williams, Katriana Nugent, Yoshinori Kato, Hailun Wang, Reem Malek, Kekoa Taparra, Jessica Cades, Anvesh Annadanam, A-Rum Yoon, Elana Fertig, Beth A. Firulli, Lucia Mazzacurati, Timothy F. Burns, Anthony B. Firulli, Steven S. An, Phuoc T. Tran Neoplasia. 2015 Jan; 17(1): 16–31. Published online 2015 Jan 23. doi: 10.1016/j.neo.2014.10.009PMCID: PMC4309734 Jing Wang, Kumar Nikhil, Keith Viccaro, Lei Chang, Max Jacobsen, George Sandusky.

TXN: Auto- and cross-reactivity to thioredoxin allergens in allergic bronchopulmonary aspergillosis. (PMID: 19032234) Glaser AG ... Rhyner C Allergy 2008 3 4 22 Thioredoxin catalyzes the S-nitrosation of the caspase-3 active site cysteine. (PMID: 16408020) Mitchell DA ... Marletta MA Nature chemical biology 2005 3 4 22 S-nitrosation of thioredoxin in the nitrogen monoxide/superoxide system activates apoptosis signal-regulating kinase 1. (PMID: 15246877) Yasinska IM ... Sumbayev VV Archives of biochemistry and biophysics 2004 3 4 22 AP-1 transcriptional activity is regulated by a direct association between thioredoxin and Ref-1. (PMID: 9108029) Hirota K ... Yodoi J Proceedings of the National Academy of Sciences of the United States of America 1997 3 4 22 Crystal structures of reduced, oxidized, and mutated human thioredoxins: evidence for a regulatory homodimer. (PMID: 8805557) Weichsel A ... Montfort WR Structure (London, England : 1993) 1996

TXNRD2: Kiermayer C, Northrup E, Schrewe A, et al. Heart-Specific Knockout of the Mitochondrial Thioredoxin Reductase (Txnrd2) Induces Metabolic and Contractile Dysfunction in the Aging Myocardium. Journal of the American Heart Association: Cardiovascular and Cer



TYR: Evaluation of the effect of narrow band-ultraviolet B on the expression of tyrosinase, TYRP-1, and TYRP-2 mRNA in vitiligo skin and their correlations with clinical improvement: A retrospective study. (PMID: 33314655) Awad SS ... Telep RAA Dermatologic therapy 2021 3 Parental exome analysis identifies shared carrier status for a second recessive disorder in couples with an affected child. (PMID: 33223529) Mor-Shaked H ... Harel T European journal of human genetics : EJHG 2021 Germline and somatic albinism variants in amelanotic/hypomelanotic melanoma: Increased carriage of TYR and OCA2 variants. (PMID: 32966289) Rayner JE ... Sturm RA PloS one 2020 3 Association between brown eye colour in rs12913832:GG individuals and SNPs in TYR, TYRP1, and SLC24A4. (PMID: 32915910) Meyer OS ... Andersen JD PloS one 2020 3 UP256 Inhibits Hyperpigmentation by Tyrosinase Expression/Dendrite Formation via Rho-Dependent Signaling and by Primary Cilium Formation in Melanocytes. (PMID: 32731326) Kang MC ... Kim SY International journal of molecular sciences 2020 3 Mapping the TYR gene reveals novel and previously reported variants in Eastern Indian patients highlighting preponderance of the same changes in multiple unrelated ethnicities. (PMID: 32115698) Ganguly K ... Sengupta M Annals of human genetics 2020 Comprehensive analysis reveals mutational spectra and common alleles in Chinese patients with oculocutaneous albinism. (PMID: 19865097) Wei A ... Li W The Journal of investigative dermatology 2010 3 21 39 70 Birth prevalence and mutation spectrum in danish patients with autosomal recessive albinism. (PMID: 19060277) Grønskov K ... Rosenberg T Investigative ophthalmology & visual science 2009 3 21 39 70 Contribution of genetic factors for melanoma susceptibility in sporadic US melanoma patients. (PMID: 19320745) Council ML ... Bowcock AM Experimental dermatology 2009 3 21 39 70 Comprehensive analysis of oculocutaneous albinism among non-Hispanic caucasians shows that OCA1 is the most prevalent OCA type. (PMID: 18463683) Hutton SM ... Spritz RA The Journal of investigative dermatology 2008 3 21 39 70 Genetic determinants of hair, eye and skin pigmentation in Europeans. (PMID: 17952075) Sulem P ... Stefansson K Nature genetics 2007

UBASH3A: Yan Ge, Taylor K. Paisie, Jeremy R.B. Newman, Lauren M. McIntyre, Patrick Concannon Diabetes. 2017 Jul; 66(7): 2033–2043. Published online 2017 Jun 15. doi: 10.2337/db16-1023 PMID: PMC5482087 Lina-Marcela Diaz-Gallo, Elena Sánchez, Norberto Ortego-Centeno, Jose Mario Sabio, Francisco J. García-Hernández, Enrique de Ramón, Miguel A. González-Gay, Torsten Witte, Hans-Joachim Anders, María F. González-Escribano, Javier Martin PLoS One. 2013; 8(4): e60646. Published online 2013 Apr 2. doi: 10.137

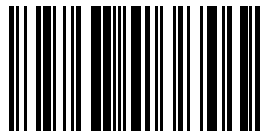
UBE2E2: Nattachet Plengvidhya, Chutima Chanprasert, Nalinee Chongjaroen, Pa-thai Yenchitsomanus, Mayuree Homsanit, Watip Tangjittipokin BMC Med Genet. 2018; 19: 93. Published online 2018 Jun 5. doi: 10.1186/s12881-018-0614-9 PMID: PMC5989367 Kuanfeng Xu, Lin Jiang, Mei Zhang, Xuqin Zheng, Yong Gu, Zhixiao Wang, Yun Cai, Hao Dai, Yun Shi, Shuai Zheng, Yang Chen, Li Ji, Xinyu Xu, Heng Chen, Min Sun, Tao Yang Medicine (Baltimore) 2016 May; 95(19): e3604. Published online 2016 May 13.

UBL7: Cloning and identification of a novel ubiquitin-like protein, BMSC-UbP, from human bone marrow stromal cells. (PMID: 12644319) Liu S ... Cao X Immunology letters 2003 2 3 4 21 Global, in vivo, and site-specific phosphorylation dynamics in signaling networks. (PMID: 17081983) Olsen JV ... Mann M Cell 2006 3 4 Solution structure of the ubiquitin-associated domain of human BMSC-UbP and its complex with ubiquitin. (PMID: 16731964) Chang YG ... Hu HY Protein science : a publication of the Protein Society 2006 3 4 The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). (PMID: 15489334) Gerhard DS ... MGC Project Team Genome research 2004 3 4 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA Nature 2020

UBQLN1P: Laurens G. Wilming, Elizabeth A. Hart, Penny C. Coggill, Roger Horton, James G. R. Gilbert, Chris Clee, Matt Jones, Christine Lloyd, Sophie Palmer, Sarah Sims, Siobhan Whitehead, David Wiley, Stephan Beck, Jennifer L. Harrow Database (Oxford) 2013; 2013: bat011. Published online 2013 Apr 15. doi: 10.1093/database/bat011 PMID: PMC3626023

UCP1: Kenji Ikeda, Qianqian Kang, Takeshi Yoneshiro, Joao Paulo Camporez, Hiroko Maki, Mayu Homma, Kosaku Shinoda, Yong Chen, Xiaodan Lu, Pema Maretich, Kazuki Tajima, Kolapo M. Ajuwon, Tomoyoshi Soga, Shingo Kajimura Nat Med. 2017 Dec; 23(12): 1454–1465. Published online 2017 Nov 13. doi: 10.1038/nm.4429 PMID: PMC5727902 Edward T. Chouchani, Lawrence Kazak, Mark P. Jedrychowski, Gina Z. Lu, Brian K. Erickson, John Szpyt, Kerry A. Pierce, Dina Laznik-Bogoslavski, Ramalingam Vetrivelan, Clary B. Cli

UCP2: Ježek P, Holendová B, Garlid KD, Jab?rek M. Mitochondrial Uncoupling Proteins: Subtle Regulators of Cellular Redox Signaling . Antioxidants & Redox Signaling. 2018;29(7):667-714. doi:10.1089/ars.2017.7225.



UCP3: Chen W, Xu H, Chen X, Liu Z, Zhang W, Xia D. Functional and Activity Analysis of Cattle UCP3 Promoter with MRFs-Related Factors. Stathopoulos C, ed. International Journal of Molecular Sciences. 2016;17(5):682. doi:10.3390/ijms17050682.

UGT2B7: Qiong Lu, Yuan-Tao Huang, Yi Shu, Ping Xu, Da-Xiong Xiang, Qiang Qu, Jian Qu Medicine (Baltimore) 2018 Jul; 97(30): e11662. Published online 2018 Jul 27. doi: 10.1097/MD.00000000000011662 PMCID: PMC6078657 Zi-zhao Yang, Li Li, Lu Wang, Ling-min Yuan, Ming-cheng Xu, Jing-kai Gu, Hui-di Jiang, Lu-shan Yu, Su Zeng Acta Pharmacol Sin. 2017 Aug; 38(8): 1184–1194. Published online 2017 May 29. doi: 10.1038/aps.2016.157 PMCID: PMC5547550 Zi-Zhao Yang, Li Li, Ming-Cheng Xu, Hai-Xing Ju, Miao Hao, Jing-Ka

UMOD: Maydan O, McDade PG, Liu Y, Wu X, Matsell DG, Eddy AA. Uromodulin deficiency alters tubular injury and interstitial inflammation but not fibrosis in experimental obstructive nephropathy. Physiological Reports. 2018;6(6):e13654. doi:10.14814/phy2.13654.

UNC13A: Benjamin Gaastra, Aleksey Shatunov, Sara Pulit, Ashley R. Jones, William Sproviero, Alexandra Gillett, Zhongbo Chen, Janine Kirby, Isabella Fogh, John F. Powell, P. Nigel Leigh, Karen E. Morrison, Pamela J. Shaw, Christopher E. Shaw, Leonard H. van den Berg, Jan H. Veldink, Cathryn M. Lewis, Ammar Al-Chalabi Amyotroph Lateral Scler Frontotemporal Degener. 2016 Nov 16; 17(7-8): 593–599. Published online 2016 Sep 1. doi: 10.1080/21678421.2016.1213852 PMCID: PMC5125285 Noa Lipstein. UNC13A in amyotrophic lateral sclerosis: from genetic association to therapeutic target Sean W Willemse ,1 Peter Harley,2 Ruben P A van Eijk ,1,3 Koen C Demaegd,1 Pavol Zelina,4 R Jeroen Pasterkamp,4 Philip van Damme ,5,6 Caroline Ingre,7 Wouter van Rheenen,1 Jan H Veldink ,1 Matthew C Kiernan ,8,9 Ammar Al- Chalabi ,10 Leonard H van den Berg,1 Pietro Fratta,2 Michael A van Es

UNC5C: Qiangqiang Shao, Tao Yang, Huai Huang, Farrah Alarmanazi, Guofa Liu J Neurosci. 2017 Jun 7; 37(23): 5620–5633. doi: 10.1523/JNEUROSCI.2617-16.2017 PMCID: PMC5469302 Sebastian Poliak, Daniel Morales, Louis-Philippe Croteau, Dayana Krawchuk, Elena Palmesino, Susan Morton, Jean-François Cloutier, Frederic Charron, Matthew B Dalva, Susan L Ackerman, Tzu-Jen Kao, Artur Kaniae Life. 2015; 4: e10841. Published online 2015 Dec 3. doi: 10.7554/eLife.10841 PMCID: PMC4764565 Quan Li, Bai-Ling Wang, Fu-Rong

USF2: Structure, sequence, and chromosome 19 localization of human USF2 and its rearrangement in a patient with multicystic renal dysplasia. (PMID: 8954795) Groenen PM ... Van de Ven WJ Genomics 1996 2 3 4 23 Upstream stimulatory factor 2 is implicated in the progression of biliary atresia by regulation of hepcidin expression. (PMID: 18970934) Huang YH ... Chen CL Journal of pediatric surgery 2008

USP24: Wang S-A, Wang Y-C, Chuang Y-P, et al. EGF-mediated inhibition of ubiquitin-specific peptidase 24 expression has a crucial role in tumorigenesis. Oncogene. 2017;36(21):2930-2945. doi:10.1038/onc.2016.445.

USP40: Dooms M, Carvalho M. Compounded medication for patients with rare diseases. Orphanet Journal of Rare Diseases. 2018;13:1. doi:10.1186/s13023-017-0741-y.

VARS2: Bruni F, Di Meo I, Bellacchio E, et al. Clinical, biochemical, and genetic features associated with VARS2-related mitochondrial disease. Human Mutation. 2018;39(4):563-578. doi:10.1002/humu.23398.

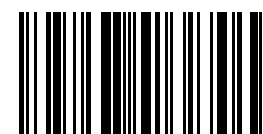
VAV3: Adaptor protein APS binds the NH2-terminal autoinhibitory domain of guanine nucleotide exchange factor Vav3 and augments its activity. (PMID: 12400014) Yabana N . Shibuya M Oncogene 2002 3 4 23 58 Biological and regulatory properties of Vav-3, a new member of the Vav family of oncoproteins. (PMID: 10523675) Movilla N . Bustelo XR Molecular and cellular biology 1999 3 4 23 58 Novel associations for hypothyroidism include known autoimmune risk loci. (PMID: 22493691) Eriksson N . Do CB PloS on

VCAN: Mitsui Y, Shiina H, Kato T, et al. Versican Promotes Tumor Progression, Metastasis and Predicts Poor Prognosis in Renal Carcinoma. Molecular cancer research?: MCR. 2017;15(7):884-895. doi:10.1158/1541-7786.MCR-16-0444.

VDR: Vitamin D receptor (VDR) gene polymorphisms and haplotypes, interactions with plasma 25-hydroxyvitamin D and 1,25-dihydroxyvitamin D, and prostate cancer risk. (PMID: 17440943) Mikhak B ... Giovannucci E The Prostate 2007 3 21 24 39 Hereditary vitamin D resistant rickets caused by a novel mutation in the vitamin D receptor that results in decreased affinity for hormone and cellular hyporesponsiveness. (PMID: 9005998) Malloy PJ ... Feldman D The Journal of clinical investigation 1997 3 4 21 69 A novel



mutation in the deoxyribonucleic acid-binding domain of the vitamin D receptor causes hereditary 1,25-dihydroxyvitamin D-resistant rickets. (PMID: 8675579) Lin NU ... Feldman D The Journal of clinical endocrinology and metabolism 1996 3 4 21 69 Two mutations in the hormone binding domain of the vitamin D receptor cause tissue resistance to 1,25 dihydroxyvitamin D3. (PMID: 8392085) Kristjansson K ... Hughes MR The Journal of clinical investigation 1993 3 4 21 69 A unique point mutation in the human vitamin D receptor chromosomal gene confers hereditary resistance to 1,25-dihydroxyvitamin D3. (PMID: 2177843) Sone T ... Pike JW Molecular endocrinology (Baltimore, Md.) 1990 3 4 21 69 Detection of VDR gene ApaI and TaqI polymorphisms in patients with type 2 diabetes mellitus using PCR-RFLP method in a Turkish population. (PMID: 19186074) Dilmec F ... van Kuilenburg AB Journal of diabetes and its complications 2010 3 21 39 Rubella vaccine-induced cellular immunity: evidence of associations with polymorphisms in the Toll-like, vitamin A and D receptors, and innate immune response genes. (PMID: 19902255) Ovsyannikova IG ... Poland GA Human genetics 2010 3 21 39 Pharmacogenetic risk factors for altered bone mineral density and body composition in pediatric acute lymphoblastic leukemia. (PMID: 20015871) te Winkel ML ... van den Heuvel-Eibrink MM Haematologica 2010 3 21 39 Calcium, vitamin D, VDR genotypes, and epigenetic and genetic changes in rectal tumors. (PMID: 20432164) Slattery ML ... Samowitz W Nutrition and cancer 2010 3 21 39 Genetic variation in the vitamin D receptor (VDR) and the vitamin D-binding protein (GC) and risk for colorectal cancer: results from the Colon Cancer Family Registry. (PMID: 20086113) Poynter JN ... Haile RW Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology 2010 3 21 39 Vitamin d pathway genes, diet, and risk of renal cell carcinoma. (PMID: 20049159) Karami S ... Moore LE International journal of endocrinology 2010 3 21 39 Maternal serum 25-hydroxyvitamin D concentrations are associated with small-for-gestational age births in white women. (PMID: 20200114) Bodnar LM ... Simhan HN The Journal of nutrition 2010 3 21 39 Vitamin D receptor gene polymorphisms and distinct clinical phenotypes of hepatitis B carriers in Taiwan. (PMID: 19693091) Huang YW ... Kao JH Genes and immunity 2010 3 21 39 Vitamin D receptor genetic polymorphisms and tuberculosis: updated systematic review and meta-analysis. (PMID: 20003690) Gao L ... Jin Q The international journal of tuberculosis and lung disease : the official journal of the International Union against Tuberculosis and Lung Disease 2010 3 21 39 Influence of vitamin D receptor haplotypes on blood lead concentrations in environmentally exposed children of Uygur and Han populations. (PMID: 20100036) Chen Y ... Tian W Biomarkers : biochemical indicators of exposure, response, and susceptibility to chemicals 2010 3 21 39 A rare haplotype of the vitamin D receptor gene is protective against diabetic nephropathy. (PMID: 19783860) Martin RJ ... Warren 3/UK GoKinD Study Group Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association 2010 3 21 39 Polymorphisms in vitamin D metabolism related genes and risk of multiple sclerosis. (PMID: 20007432) Simon KC ... Ascherio A Multiple sclerosis (Houndmills, Basingstoke, England) 2010 3 21 39 Maternal 25-hydroxyvitamin D concentration and offspring birth size: effect modification by infant VDR genotype. (PMID: 19018272) Morley R ... Ponsonby AL European journal of clinical nutrition 2009 3 21 39 Staphylococcus aureus nasal carriage might be associated with vitamin D receptor polymorphisms in type 1 diabetes. (PMID: 19411183) Panierakis C ... Galanakis E International journal of infectious diseases : IJID : official publication of the International Society for Infectious Diseases 2009 3 21 39 Genetic and environmental factors in human osteoporosis from Sub-Saharan to Mediterranean areas. (PMID: 19255718) Musumeci M ... Musumeci S Journal of bone and mineral metabolism 2009 3 21 39 Plasma 1,25 dihydroxy vitamin D3 level and expression of vitamin d receptor and cathelicidin in pulmonary tuberculosis. (PMID: 19219539) Selvaraj P ... Alagarasu K Journal of clinical immunology 2009 3 21 39 Vitamin D binding protein genotype and osteoporosis. (PMID: 19488670) Fang Y ... Uitterlinden AG Calcified tissue international 2009 3 21 39 Analysis of SNPs and haplotypes in vitamin D pathway genes and renal cancer risk. (PMID: 19753122) Karami S ... Moore LE PloS one 2009 3 21 39 Association of a single nucleotide polymorphism in the constitutive androstane receptor gene with bone mineral density. (PMID: 19702932) Urano T ... Inoue S Geriatrics & gerontology international 2009 3 21 39 Association of oestrogen receptor gene polymorphism with the long-term results of rotational acetabular osteotomy. (PMID: 19219433) Yamanaka M ... Kurosawa H International orthopaedics 2009 3 21 39 Associations of vitamin D receptor, calcium-sensing receptor and parathyroid hormone gene polymorphisms with calcium homeostasis and peripheral bone density in adult Finns. (PMID: 19690432) Laaksonen MM ... Lamberg-Allardt CJ Journal of nutrigenetics and nutrigenomics 2009 3 21 39 Vitamin D pathway gene variants and prostate cancer risk. (PMID: 19454612) Holt SK ... Stanford JL Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology 2009 3 21 39 Vitamin D receptor TaqI, BsmI and ApaI polymorphisms and osteoarthritis susceptibility: a meta-analysis. (PMID: 19073371) Lee YH ... Song GG Joint bone spine 2009 3 21 39 Association between vitamin D receptor gene polymorphisms and severe chronic periodontitis in a Chinese population. (PMID: 19335080) Wang C ... Zhang J Journal of periodontology 2009 3 21 39 Vitamin D receptor polymorphisms and breast cancer risk: results from the National Cancer Institute Breast and Prostate Cancer Cohort Consortium. (PMID: 19124512) McKay JD ... Thun MJ Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the



American Society of Preventive Oncology 2009 3 21 39 Polymorphisms of the vitamin D receptor gene and stress fractures. (PMID: 19391078) Chatzipapas C ... Stratakis CA Hormone and metabolic research = Hormon- und Stoffwechselforschung = Hormones et métabolisme 2009 3 21 39 Vitamin D receptor polymorphisms are associated with increased susceptibility to primary biliary cirrhosis in Japanese and Italian populations. (PMID: 19376604) Tanaka A ... Takikawa H Journal of hepatology 2009 3 21 39 5' regulatory and 3' untranslated region polymorphisms of vitamin D receptor gene in south Indian HIV and HIV-TB patients. (PMID: 18712587) Alagarasu K ... Narayanan PR Journal of clinical immunology 2009 3 21 39 The bone mass density in postmenopausal women using hormonal replacement therapy in relation to polymorphism in vitamin D receptor and estrogen receptor genes. (PMID: 19903038) Brodowska A ... Nawrocka-Rutkowska J Gynecological endocrinology : the official journal of the International Society of Gynecological Endocrinology 2009 3 21 39 Vitamin D receptor and calcium sensing receptor polymorphisms and the risk of colorectal cancer in European populations. (PMID: 19706842) Jenab M ... Riboli E Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology 2009 3 21 39 Genetic determinants of extracellular magnesium concentration: analysis of multiple candidate genes, and evidence for association with the estrogen receptor alpha (ESR1) locus. (PMID: 19695239) Shuen AY ... Cole DE Clinica chimica acta; international journal of clinical chemistry 2009 3 21 39 Association between VDR and ESR1 gene polymorphisms with bone and obesity phenotypes in Chinese male nuclear families. (PMID: 19960008) Gu JM ... Zhang ZL Acta pharmacologica Sinica 2009

VEGFA: Chesnokov MS, Khesina PA, Shavochkina DA, et al. Shift in VEGFA isoform balance towards more angiogenic variants is associated with tumor stage and differentiation of human hepatocellular carcinoma. Singh SR, ed. PeerJ. 2018;6:e4915. doi:10.7717/peerj.491

VKORC1: Nolan Chatron, Abdessalem Hammed, Etienne Benoît, Virginie Lattard Nutrients. 2019 Jan; 11(1): 67. Published online 2019 Jan 1. doi: 10.3390/nu11010067 PMID: PMC6357001 Katrin J. Czogalla, Kerstin Liphardt, Klara Höning, Veit Hornung, Arijit Biswas, Matthias Watzka, Johannes Oldenburg Blood Adv. 2018 Mar 27; 2(6): 691–702. Published online 2018 Mar 26. doi: 10.1182/bloodadvances.2017006775 PMID: PMC5873226 Joffrey Goulois, Véronique Lambert, Lionel Legros, Etienne Benoit, Virginie Lattard Ecol E

VPS26A: Kirsty J. McMillan, Matthew Gallon, Adam P. Jellett, Thomas Clairfeuille, Frances C. Tilley, Ian McGough, Chris M. Danson, Kate J. Heesom, Kevin A. Wilkinson, Brett M. Collins, Peter J. Cullen J Cell Biol. 2016 Aug 15; 214(4): 389–399. doi: 10.1083/jcb.201604057 PMID: PMC4987296 Matthew Gallon, Thomas Clairfeuille, Florian Steinberg, Caroline Mas, Rajesh Ghai, Richard B. Sessions, Rohan D. Teasdale, Brett M. Collins, Peter J. Cullen Proc Natl Acad Sci U S A. 2014 Sep 2; 111(35): E3604–E3613.

VPS33B: Binggang Xiang, Guoying Zhang, Shaojing Ye, Rui Zhang, Cai Huang, Jun Liu, Min Tao, Changgeng Ruan, Susan S. Smyth, Sidney W. Whiteheart, Zhenyu Li Circulation. Author manuscript; available in PMC 2016 Dec 15. Published in final edited form as: Circulation. 2015 Dec 15; 132(24): 2334–2344. Published online 2015 Sep 23. doi: 10.1161/CIRCULATIONAHA.115.018361 PMID: PMC4679702 Hao Gu, Chiqi Chen, Xiaoxin Hao, Conghui Wang, Xiaocui Zhang, Zhen Li, Hongfang Shao, Hongxiang Zeng, Zhuo Yu, Li Xie.

VSIG10: Andrew C. Nelson, Arne W. Mould, Elizabeth K. Bikoff, Elizabeth J. Robertson Sci Rep. 2017; 7: 6793. Published online 2017 Jul 28. doi: 10.1038/s41598-017-06859-9 PMID: PMC5533796 Aileen Marshall, Margus Lukk, Claudia Kutter, Susan Davies, Graeme Alexander, Duncan T. Odom PLoS One. 2013; 8(3): e59459. Published online 2013 Mar 18. doi: 10.1371/journal.pone.0059459 PMID: PMC3601070 Scott D. Cook-Sather, Jin Li, Theodora K. Goebel, Emily M. Sussman, Mohamed A. Rehman, Hakon Hakonarson Pain.

VTCN1: Radichev IA, Maneva-Radicheva LV, Amatya C, et al. Loss of peripheral protection in pancreatic islets by proteolysis-driven impairment of VTCN1 (B7-H4) presentation is associated with the development of autoimmune diabetes. Journal of immunology (Baltimor

VWF: Flood VH, Johnsen JM, Kochelek C, et al. Common VWF sequence variants associated with higher VWF and FVIII are less frequent in subjects diagnosed with type 1 VWD . Research and Practice in Thrombosis and Haemostasis. 2018;2(2):390-398. doi:10.1002/rth2.1



WDFY4: Yiqun Zhang, Lin Bo, Hui Zhang, Chao Zhuang, Ruiping LiuInt J Mol Sci. 2014 Feb; 15(2): 2712–2721. Published online 2014 Feb 17. doi: 10.3390/ijms15022712PMCID: PMC3958877Wanling Yang, Nan Shen, Dong-Qing Ye, Qiji Liu, Yan Zhang, Xiao-Xia Qian, Nattiya Hirankarn, Dingge Ying, Hai-Feng Pan, Chi Chiu Mok, Tak Mao Chan, Raymond Woon Sing Wong, Ka Wing Lee, Mo Yin Mok, Sik Nin Wong, Alexander Moon Ho Leung, Xiang-Pei Li, Yingyos Avihingsanon, Chun-Ming Wong, Tsz Leung Lee, Marco Hok Kung Ho, Pa

WDPCP: Cheng Cui, Bishwanath Chatterjee, Thomas P. Lozito, Zhen Zhang, Richard J. Francis, Hisato Yagi, Lisa M. Swanhart, Subramaniam Sanker, Deanne Francis, Qing Yu, Jovenal T. San Agustin, Chandrakala Puligilla, Tania Chatterjee, Terry Tansey, Xiaoqin Liu, Matthew W. Kelley, Elias T. Spiliotis, Adam V. Kwiatkowski, Rocky Tuan, Gregory J. Pazour, Neil A. Hukriede, Cecilia W. LoPLoS Biol. 2013 Nov; 11(11): e1001720. Published online 2013 Nov 26.

WDR11-AS1: Timothy J. Hohman, Mary Ellen I. Koran, Tricia A. Thornton-Wells, for the Alzheimer's Neuroimaging Initiative Front Aging Neurosci. 2014; 6: 183. Published online 2014 Aug 4. doi: 10.3389/fnagi.2014.00183PMCID: PMC4121544 Ho-Young Son, Yul Hwangbo, Seong-Keun Yoo, Sun-Wha Im, San Duk Yang, Soo-Jung Kwak, Min Seon Park, Soo Heon Kwak, Sun Wook Cho, Jun Sun Ryu, Jeongseon Kim, Yuh-Seog Jung, Tae Hyun Kim, Su-jin Kim, Kyu Eun Lee, Do Joon Park, Nam Han Cho, Joohon Sung, Jeong-Sun Seo, Eun Kyun

WDR12: Anne-Mari Moilanen, Jaana Rysä, Leena Kaikkonen, Teemu Karvonen, Erja Mustonen, Raisa Serpi, Zoltán Szabó, Olli Tenhunen, Zsolt Bagyura, Juha Näpänkangas, Pauli Ohukainen, Pasi Tavi, Risto Kerkelä, Margrét Leósdóttir, Björn Wahlstrand, Thomas Hedner, Olle Melander, Heikki RuskoahoPLoS One. 2015; 10(4): e0124907. Published online 2015 Apr 27. doi: 10.1371/journal.pone.0124907PMCID: PMC4411154 Yancun Yin, Ling Zhou, Renhui Zhan, Qiang Zhang, Minjing LiCancer Manag Res. 2018; 10: 3985–3993.

WFS1: Yasufumi Sakakibara, Michiko Sekiya, Naoki Fujisaki, Xiuming Quan, Koichi M. IijimaPLoS Genet. 2018 Jan; 14(1): e1007196. Published online 2018 Jan 22. doi: 10.1371/journal.pgen.1007196PMCID: PMC5794194 Triin Tekko, Triin Laksper, Anni Allikalt, Jaanus End, Karl Rene Kõlvart, Toomas Jagomäe, Anton Terasmaa, Mari-Anne Philips, Tanel Visnapuu, Fred Väärtnõu, Scott F. Gilbert, Ago Rinken, Eero Vasar, Kersti LilleväliPLoS One. 2017; 12(3): e0172825. Published online 2017 Mar 7.

WNT16: Movérare-Skrtic S, Wu J, Henning P, et al. The bone-sparing effects of estrogen and WNT16 are independent of each other. Proceedings of the National Academy of Sciences of the United States of America. 2015;112(48):14972-14977. doi:10.1073/pnas.1520408112

WRN: Large-scale evaluation of candidate genes identifies associations between DNA repair and genomic maintenance and development of benzene hematotoxicity. (PMID: 18978339) Lan Q . Rothman N Carcinogenesis 2009 3 23 45 58 WRN polymorphisms affect expression levels of plasminogen activator inhibitor type 1 in cultured fibroblasts. (PMID: 18312663) Castro E . Angel-Chávez LI BMC cardiovascular disorders 2008 3 23 45 58 The Werner syndrome protein binds replication fork and holliday junction DNAs

WSCD2: Lo M-T, Hinds DA, Tung JY, et al. Genome-wide analyses for personality traits identify six genomic loci and show correlations with psychiatric disorders. Nature genetics. 2017;49(1):152-156. doi:10.1038/ng.3736.

WWC1: Ting Lin, Li Zhang, Shuangxin Liu, Yuanhan Chen, Hong Zhang, Xingchen Zhao, Ruizhao Li, Qianmei Zhang, Ruyi Liao, Zongshun Huang, Bin Zhang, Wenjian Wang, Xinling Liang, Wei ShiMol Med Rep. 2017 Dec; 16(6): 8685–8690. Published online 2017 Oct 4. doi: 10.3892/mmr.2017.7708PMCID: PMC5779946Upal Basu-Roy, N. Sumru Bayin, Kirk Rattanakorn, Eugenia Han, Dimitris G. Placantonakis, Alka Mansukhani, Claudio BasilicoNat Commun. 2015; 6: 6411. Published online 2015 Apr 2. doi: 10.1038/ncomms7411PMCI

XKR6: Young Bin Joo, Jiwoo Lim, Betty P. Tsao, Swapan K. Nath, Kwangwoo Kim, Sang-Cheol BaeSci Rep. 2018; 8: 9962. Published online 2018 Jul 2. doi: 10.1038/s41598-018-28128-zCorrection in: Sci Rep. 2018; 8: 11713.PMCID: PMC6028392Prithvi Raj, Ekta Rai, Ran Song, Shaheen Khan, Benjamin E Wakeland, Kasthuribai Viswanathan, Carlos Arana, Chaoying Liang, Bo Zhang, Igor Dozmorov, Ferdicia Carr-Johnson, Mitja Mitrovic, Graham B Wiley, Jennifer A Kelly, Bernard R Lauwerys, Nancy J Olsen, Chris Cotsapas



XPC: Mihaela Robu, Rashmi G. Shah, Nupur K. Purohit, Pengbo Zhou, Hanspeter Naegeli, Girish M. Shah *Proc Natl Acad Sci U S A*. 2017 Aug 15; 114(33): E6847–E6856. Published online 2017 Jul 31. doi: 10.1073/pnas.1706981114 PMCID: PMC5565455 B. Bidon, I. Iltis, M. Semer, Z. Nagy, A. Larnicol, A. Cribier, M. Benkirane, F. Coin, J-M. Egly, N. Le May *Nat Commun*. 2018; 9: 2610. Published online 2018 Jul 4. doi: 10.1038/s41467-018-05010-0 PMCID: PMC6031651 Jing Yan Krzeszinski, Vitnary Choe, Jia Shao, Xin Bao

XRCC1: Cannan WJ, Rashid I, Tomkinson AE, Wallace SS, Pederson DS. The Human Ligase III?-XRCC1 Protein Complex Performs DNA Nick Repair after Transient Unwrapping of Nucleosomal DNA. *The Journal of Biological Chemistry*. 2017;292(13):5227-5238. doi:10.1074/jbc.M1

XRCC2: Park J-Y, Virts EL, Jankowska A, et al. COMPLEMENTATION OF HYPERSENSITIVITY TO DNA INTERSTRAND CROSSLINKING AGENTS DEMONSTRATES THAT XRCC2 IS A FANCONI ANEMIA GENE. *Journal of medical genetics*. 2016;53(10):672-680. doi:10.1136/jmedgenet-2016-103847.

ZBTB46: Yu Wang, He-Ying Sun, Sandeep Kumar, Maria del Mar Puerta, Hanjoong Jo, Amir Rezvan *Lab Invest*. 2019 Mar; 99(3): 305–318. Published online 2018 Jun 8. doi: 10.1038/s41374-018-0060-5 PMCID: PMC6286701 Miche Rombouts, Nathalie Cools, Mandy O. J. Grootaert, Flore de Bakker, Ilse Van Brussel, An Wouters, Guido R. Y. De Meyer, Benedicte Y. De Winter, Dorien M. Schrijvers *PLoS One*. 2017; 12(1): e0169608. Published online 2017 Jan 6. doi: 10.1371/journal.pone.0169608 PMCID: PMC5218565 Ansuman T. Satpath

ZFHX3: Dan Zhao, Gui Ma, Xiaolin Zhang, Yuan He, Mei Li, Xueying Han, Liya Fu, Xue-Yuan Dong, Tamas Nagy, Qiang Zhao, Li Fu, Jin-Tang Dong *J Biol Chem*. 2016 Jun 10; 291(24): 12809–12820. Published online 2016 Apr 20. doi: 10.1074/jbc.M116.719377 PMCID: PMC4933452 Yufeng Huang, Chuchu Wang, Yufeng Yao, Xiaoyu Zuo, Shanshan Chen, Chengqi Xu, Hongfu Zhang, Qiulun Lu, Le Chang, Fan Wang, Pengxia Wang, Rongfeng Zhang, Zhenkun Hu, Qixue Song, Xiaowei Yang, Cong Li, Sisi Li, Yuanyuan Zhao, Qin Yang.

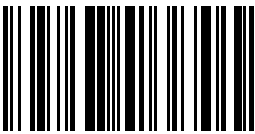
ZNF175: Tea Kaartokallio, Alejandra Cervera, Anjuska Kyllönen, Krista Laivuori, The FINNPEC Core Investigator Group *Sci Rep*. 2015; 5: 14107. Published online 2015 Sep 21. doi: 10.1038/srep14107 Correction in: *Sci Rep*. 2016; 6: 17245. PMCID: PMC4585671 Zhongyan Wang, Eric P Bishop, Peter A Burke *BMC Genomics*. 2011; 12: 128. Published online 2011 Feb 25. doi: 10.1186/1471-2164-12-128 PMCID: PMC3053261 Xiaoxiao Gao, Jing Ye, Chen Yang, Kaifa Zhang, Xiumei Li, Lei Luo, Jianping Ding, Yunsheng Li, Hongguo Ca

ZNF536: Zhen Qin, Fangli Ren, Xialian Xu, Yongming Ren, Hongge Li, Yinyin Wang, Yonggong Zhai, Zhijie Chang *Mol Cell Biol*. 2009 Jul; 29(13): 3633–3643. Published online 2009 Apr 27. doi: 10.1128/MCB.00362-09 PMCID: PMC2698762 Eugene Lin, Po-Hsiu Kuo, Yu-Li Liu, Younger W.-Y. Yu, Albert C. Yang, Shih-Jen Tsai *Front Psychiatry*. 2018; 9: 290. Published online 2018 Jul 6. doi: 10.3389/fpsy.2018.00290 PMCID: PMC6043864 Stacey J. Winham, Alfredo B. Cuellar-Barboza, Susan L. McElroy, Alfredo Oliveros.

ZNF648: Biological, clinical and population relevance of 95 loci for blood lipids. (PMID: 20686565) Teslovich TM ... Kathiresan S *Nature* 2010 3 39 The DNA sequence and biological annotation of human chromosome 1. (PMID: 16710414) Gregory SG ... Prigmore E *Nature* 2006 3 4 Characterization and evolutionary origin of novel C2H2 zinc finger protein (ZNF648) required for both erythroid and megakaryocyte differentiation in humans. (PMID: 33054117) Ferguson DCJ ... Frayne J *Haematologica* 2021 3 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA *Nature* 2020 3 UFMylation maintains tumour suppressor p53 stability by antagonizing its ubiquitination. (PMID: 32807901) Liu J ... Cong YS *Nature cell biology* 2020 Characterization and evolutionary origin of novel C2H2 zinc finger protein (ZNF648) required for both erythroid and megakaryocyte differentiation in humans. (PMID: 33054117) Ferguson DCJ ... Frayne J *Haematologica* 2021 The SNP rs10911021 is associated with oxidative stress in coronary heart disease patients from Pakistan Saleem Ullah Shahid, Shabana & Steve Humphries *Lipids in Health and Disease* volume 17, Article number: 6 (2018)

ZNF767P: Binghai Chen, Chengyue Wang, Jin Zhang, Yang Zhou, Wei Hu, Tao Guo *Cancer Cell Int*. 2018; 18: 157. Published online 2018 Oct 11. doi: 10.1186/s12935-018-0652-6 PMCID: PMC6180637 Pierre-Benoit Ancey, Barbara Testoni, Marion Gruffaz, Marie-Pierre Cros, Geoffroy Durand, Florence Le Calvez-Kelm, David Durantel, Zdenko Herceg, Hector Hernandez-Vargas *Oncotarget*. 2015 Dec 29; 6(42): 44877–44891. Published online 2015 Nov 2. doi: 10.18632/oncotarget.6270 PMCID: PMC4792598 Yue Teng, Yuzhuo Wang.

Name	Sample		
Age		Gender	F
		Report date	12/09/2025
Prescriber	Health insurance		



Sample

ZNF827: Liu Z, Li F, Zhang B, Li S, Wu J, Shi Y. Structural Basis of Plant Homeodomain Finger 6 (PHF6) Recognition by the Retinoblastoma Binding Protein 4 (RBBP4) Component of the Nucleosome Remodeling and Deacetylase (NuRD) Complex. The Journal of Biological Chemistry. 2017;292(12):4563-4572. doi:10.1074/jbc.M117.008000.

ZPR1: Genabai NK, Kannan A, Ahmad S, Jiang X, Bhatia K, Gangwani L. Deregulation of ZPR1 causes respiratory failure in spinal muscular atrophy. Scientific Reports. 2017;7:8295. doi:10.1038/s41598-017-07603-z.

