

# HEALTH

PANEL

**MENTAL HEALTH**

Name: Sample

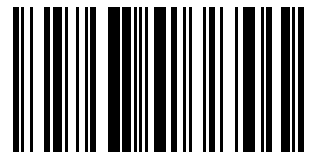
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

## 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.***

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## 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.





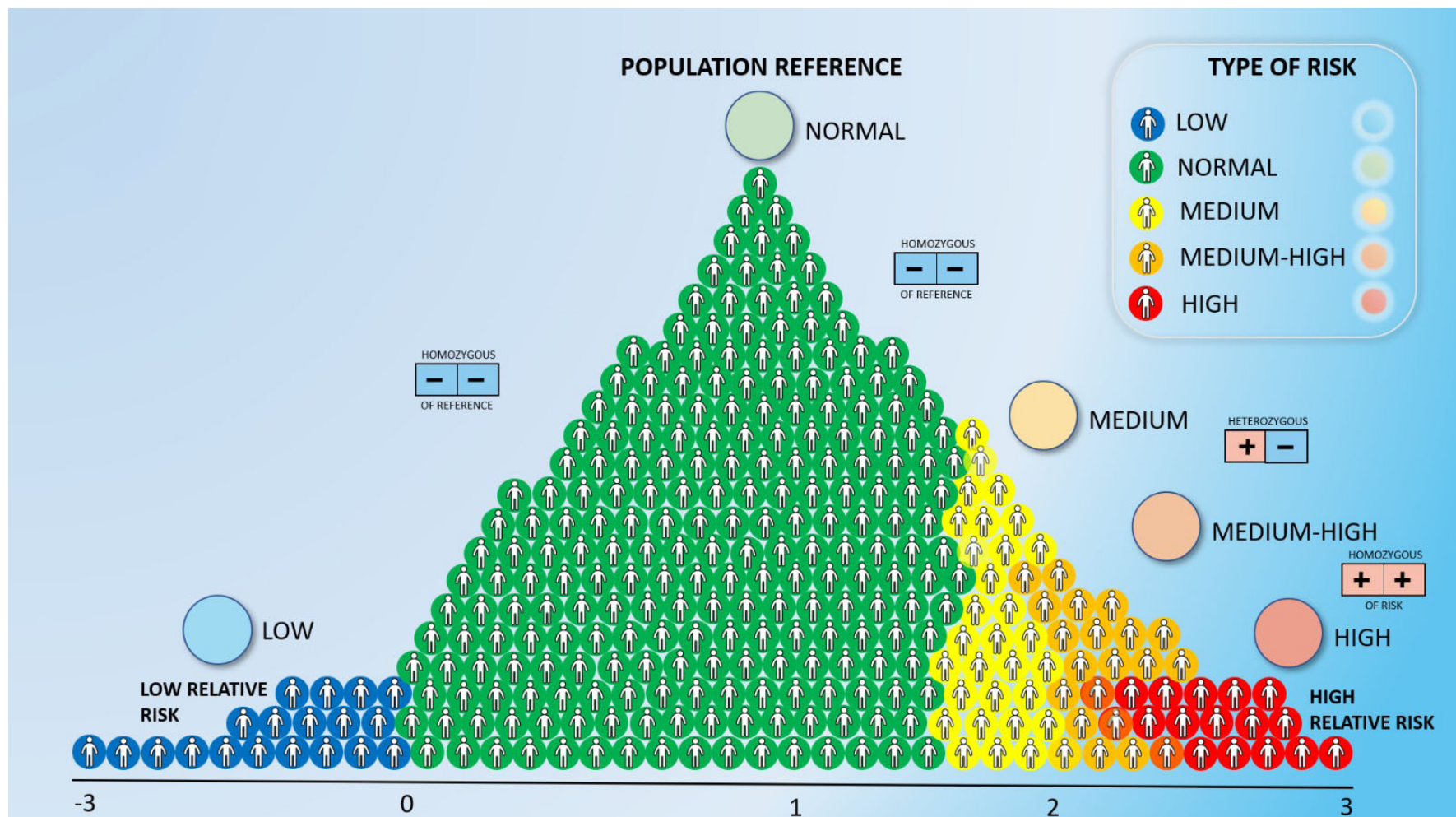
## How to interpret the exam:

### FIRST PART

The analyzed genetic CONDITIONS are grouped into CATEGORIES.

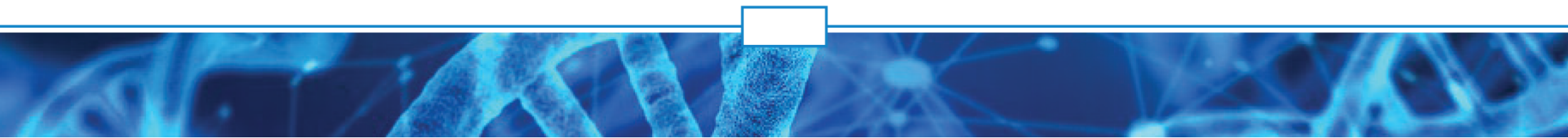
Each CONDITION is presented according to its MAGNITUDE. That is, what is the genetic susceptibility (intensity or possibility) of the analyzed condition to express itself (happen).

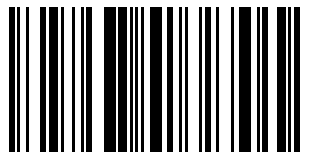
- If the susceptibility is TOO HIGH, a RED dot will appear
- If the susceptibility is HIGH, an ORANGE dot will appear
- If the susceptibility is AVERAGE, a YELLOW dot will appear
- If the susceptibility is NORMAL a GREEN dot will appear
- If the susceptibility is LOW, a BLUE dot will appear
- If the 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



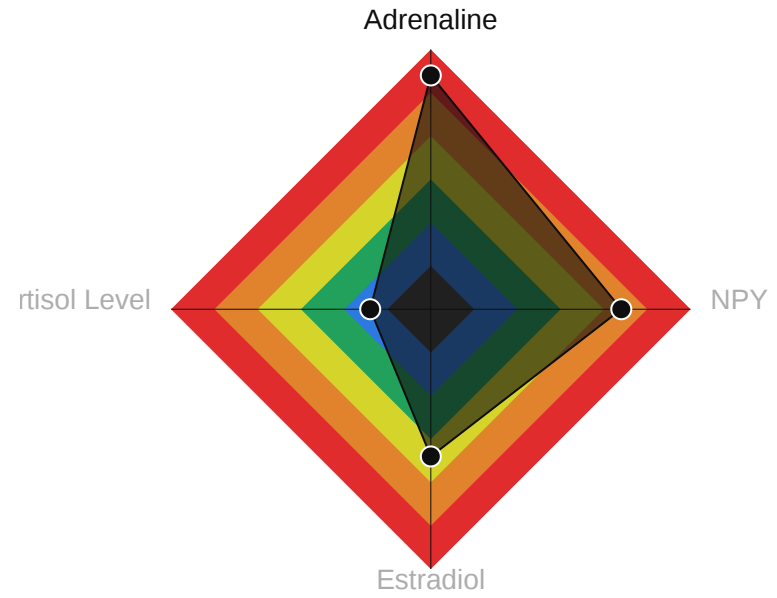


## MOST RELEVANT CONDITIONS BY CATEGORY

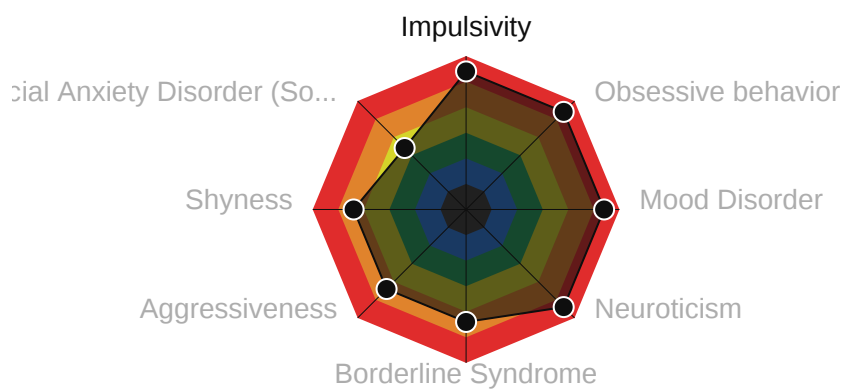
### PSYCHIATRIC



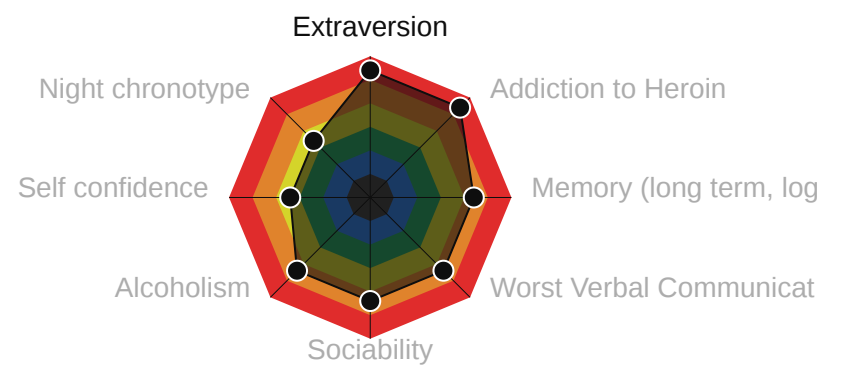
### HORMONES



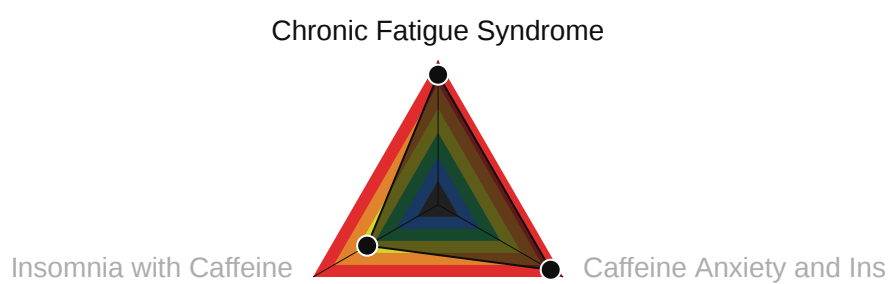
### BEHAVIORAL CHANGES



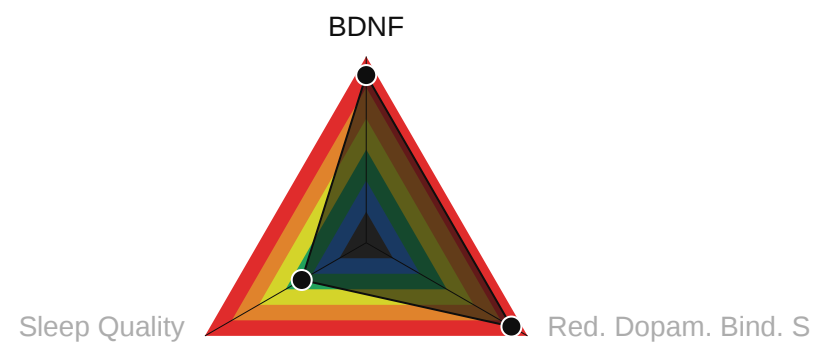
### PERSONAL CHARACTERISTICS

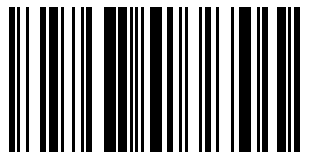


### SLEEP



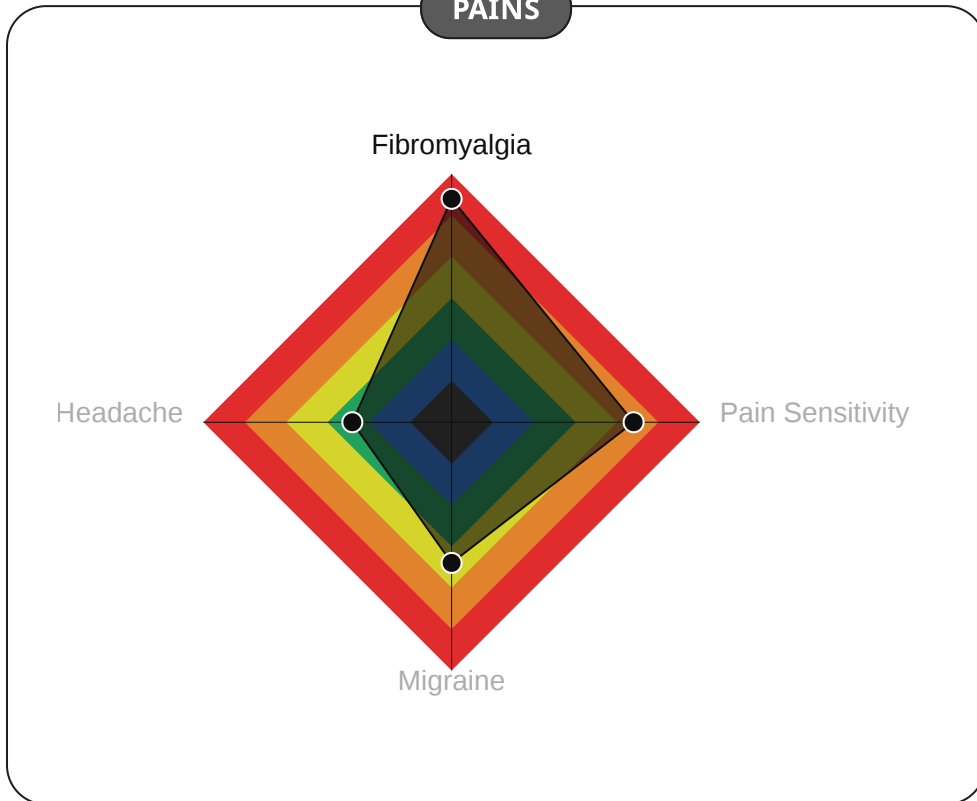
### NEUROLOGICAL



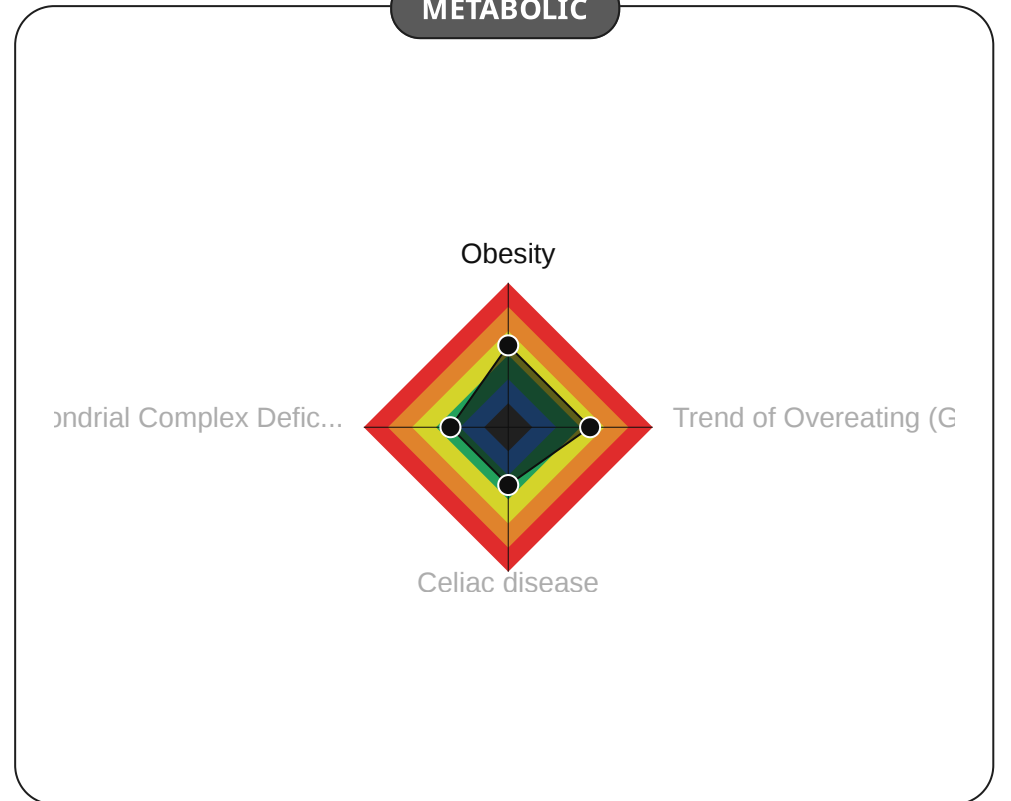


## MOST RELEVANT CONDITIONS BY CATEGORY

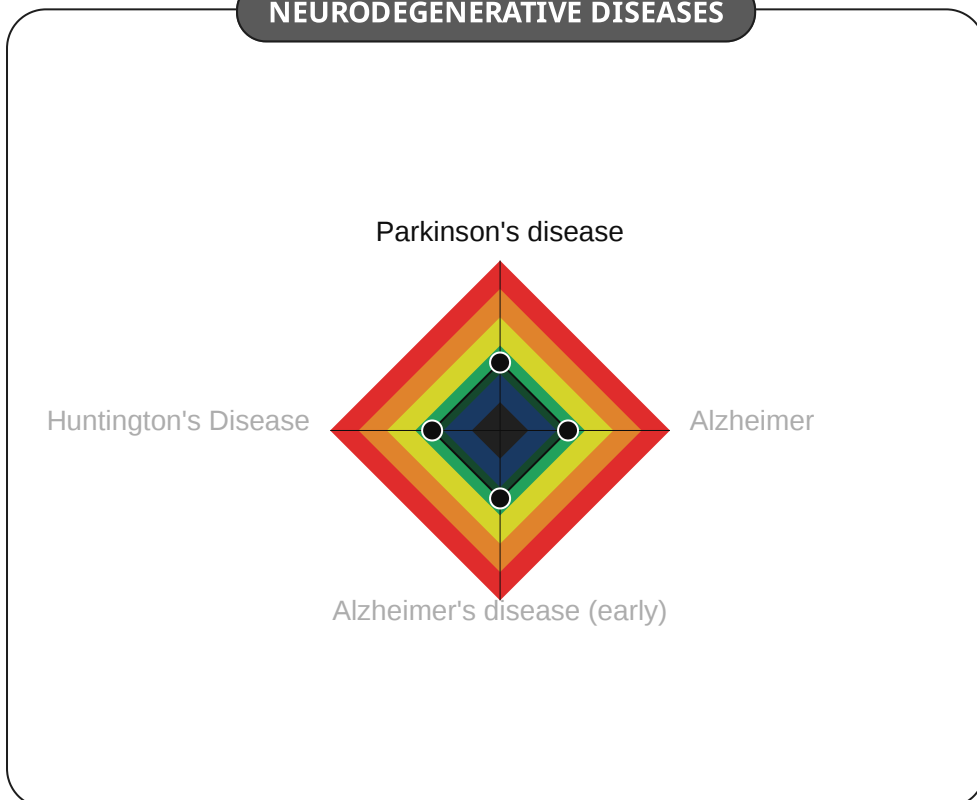
### PAINS



### METABOLIC



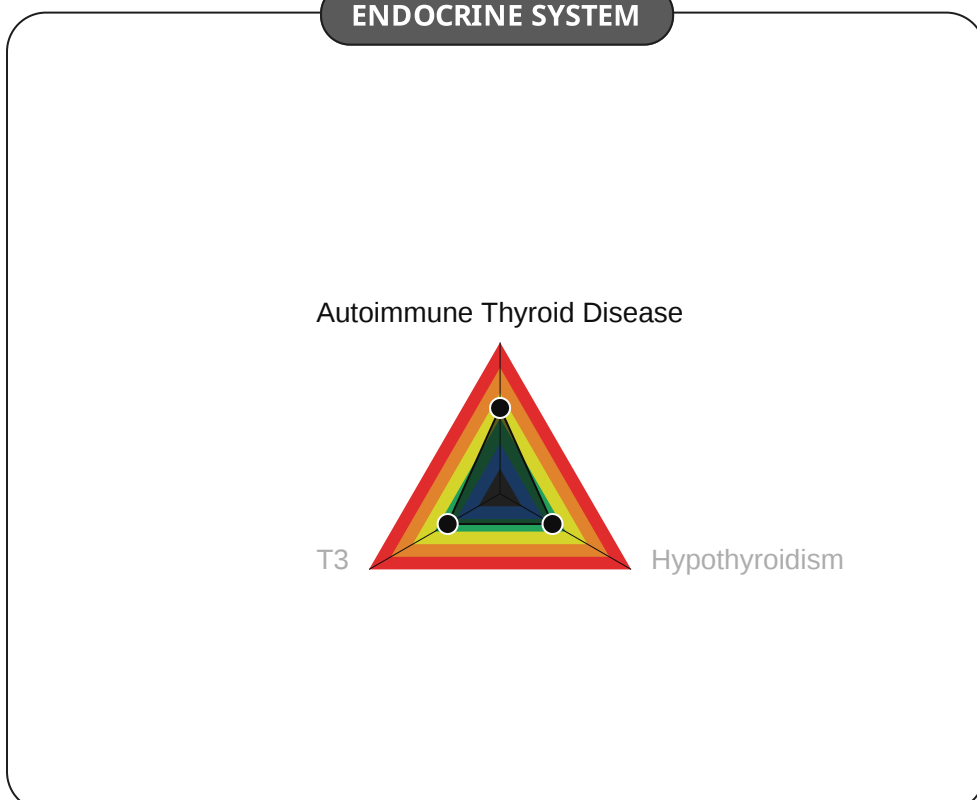
### NEURODEGENERATIVE DISEASES



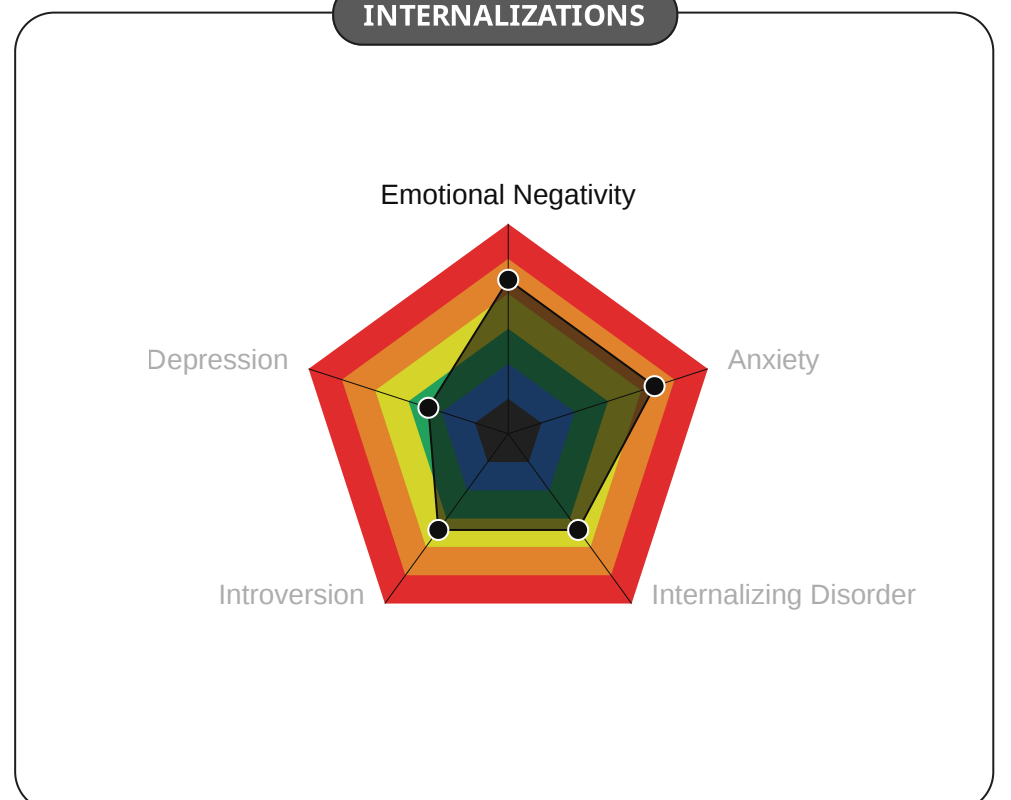
### REASONS FOR CONFLICT

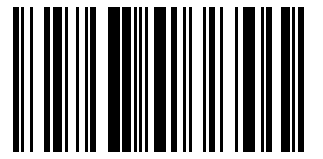


### ENDOCRINE SYSTEM



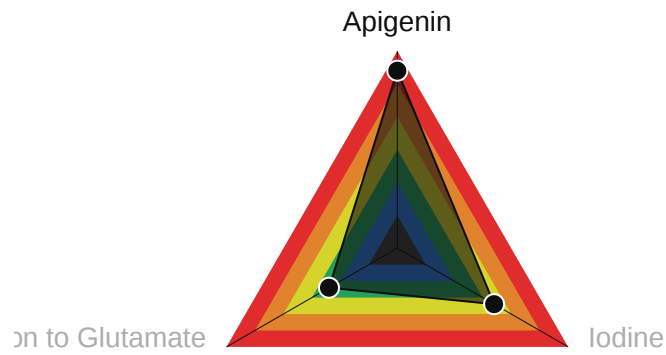
### INTERNALIZATIONS



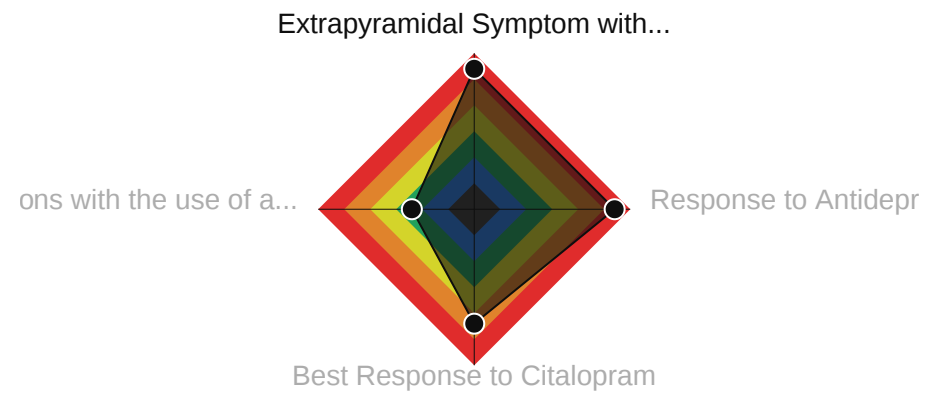


## MOST RELEVANT CONDITIONS BY CATEGORY

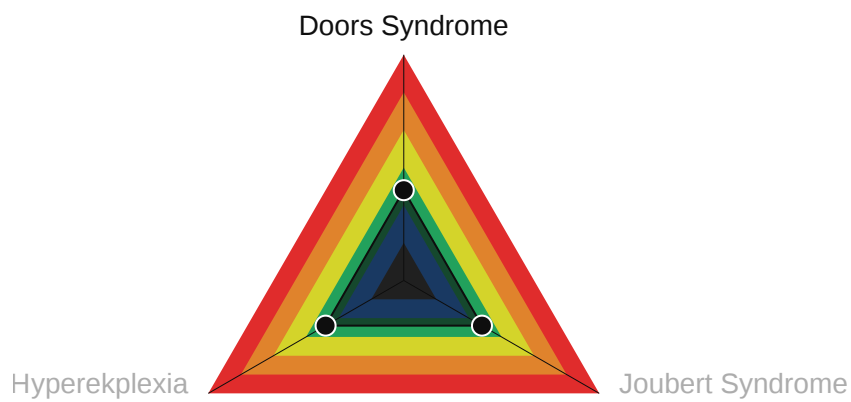
### NEED FOR NUTRIENTS



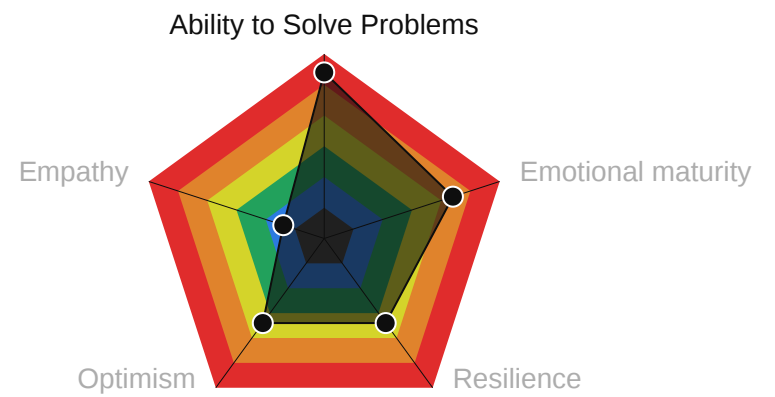
### DRUG REACTIONS



### GENETIC DISEASES

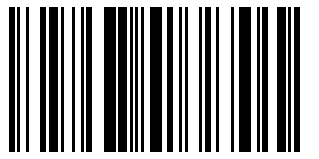


### BENEFITS



### INSECURITIES





## SUMMARY OF RESULTS

### Aging

Aging (quality) 15 - - 4 + - 1 + + ● NORMAL

### Allergies

Asthma 6 - - 1 + - 1 + + ● MEDIUM

### Amino acids

L-arginine 2 - - 0 + - 0 + + ● NORMAL

Serine Deficiency 4 - - 0 + - 0 + + ● NORMAL

### Behavioral

Memory (Best) 0 - - 0 + - 1 + + ● HIGH

### Behavioral Changes

Impulsivity 1 - - 6 + - 2 + + ● HIGH

Obsessive behavior 3 - - 2 + - 4 + + ● HIGH

Mood Disorder 1 - - 0 + - 1 + + ● HIGH

Neuroticism 5 - - 2 + - 4 + + ● HIGH

Borderline Syndrome 0 - - 0 + - 1 + + ● MEDIUM-HIGH

Aggressiveness 1 - - 1 + - 3 + + ● MEDIUM-HIGH

Shyness 5 - - 2 + - 3 + + ● MEDIUM-HIGH

Social Anxiety Disorder (Social Phobia) 1 - - 0 + - 0 + + ● MEDIUM

Bipolar disorder 11 - - 0 + - 2 + + ● MEDIUM

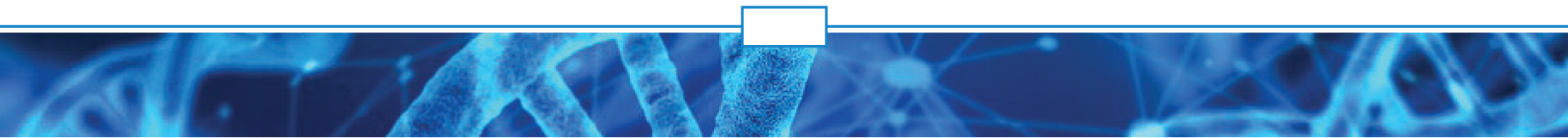
Anger 2 - - 1 + - 0 + + ● NORMAL

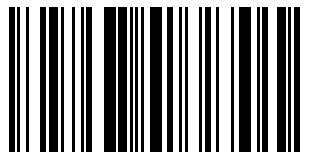
Explosive temper 2 - - 0 + - 0 + + ● NORMAL

### Benefits

Ability to Solve Problems 2 - - 6 + - 4 + + ● HIGH

Emotional maturity 4 - - 2 + - 5 + + ● MEDIUM-HIGH





Resilience	4	-	-	2	+	-	3	+	+	● MEDIUM
Optimism	0	-	-	3	+	-	0	+	+	● MEDIUM
Empathy	1	-	-	1	+	-	0	+	+	● LOW

### Cancer

Neoplasms (General Risk)	20	-	-	8	+	-	6	+	+	● MEDIUM
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### Dentistry

Bruxism	1	-	-	1	+	-	1	+	+	● MEDIUM
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### Drug Reactions

Extrapyramidal Symptom with Risperidone	0	-	-	0	+	-	1	+	+	● HIGH
Response to Antidepressants	0	-	-	3	+	-	1	+	+	● HIGH
Best Response to Citalopram	0	-	-	1	+	-	0	+	+	● MEDIUM-HIGH
Reactions with the use of antidepressants (SSRI)	0	-	-	1	+	-	0	+	+	● NORMAL

### Endocrine system

Autoimmune Thyroid Disease	4	-	-	0	+	-	1	+	+	● MEDIUM
Hypothyroidism	13	-	-	1	+	-	1	+	+	● NORMAL
T3	1	-	-	0	+	-	0	+	+	● NORMAL

### Genetic diseases

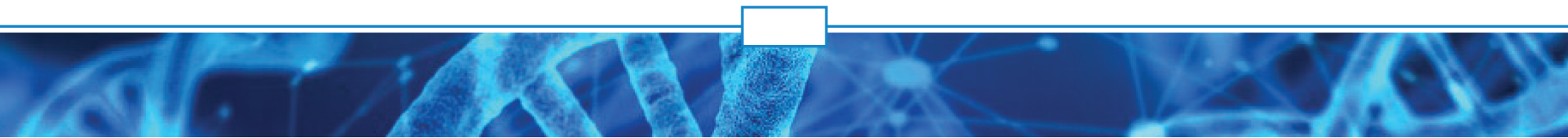
Doors Syndrome	1	-	-	0	+	-	0	+	+	● NORMAL
Joubert Syndrome	1	-	-	0	+	-	0	+	+	● NORMAL
Hyperekplexia	1	-	-	0	+	-	0	+	+	● NORMAL

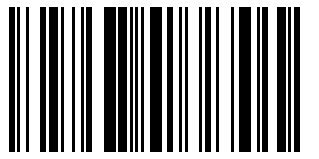
### Hereditary diseases

Fragile X Syndrome	3	-	-	0	+	-	0	+	+	● NORMAL
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### Hormones

Adrenaline	0	-	-	1	+	-	1	+	+	● HIGH
Neuropeptide Y (NPY)	0	-	-	0	+	-	1	+	+	● MEDIUM-HIGH






Estradiol	1	-	-	0	+	-	1	+	+	 MEDIUM
Cortisol Level	4	-	-	1	+	-	0	+	+	 LOW

### Insecurities

Fear Uncertainty	0	-	-	0	+	-	1	+	+	 MEDIUM-HIGH
Fears	1	-	-	0	+	-	0	+	+	 MEDIUM
Shame	1	-	-	1	+	-	0	+	+	 MEDIUM

### Instability

Migratory Behavior	0	-	-	0	+	-	1	+	+	 MEDIUM-HIGH
Explorative Behavior	0	-	-	0	+	-	1	+	+	 MEDIUM-HIGH

### Internalizations

Emotional Negativity	0	-	-	0	+	-	2	+	+	 MEDIUM-HIGH
Anxiety	4	-	-	1	+	-	3	+	+	 MEDIUM-HIGH
Internalizing Disorder	0	-	-	2	+	-	0	+	+	 MEDIUM
Introversion	1	-	-	1	+	-	0	+	+	 MEDIUM
Depression	2	-	-	4	+	-	0	+	+	 NORMAL

### Metabolic

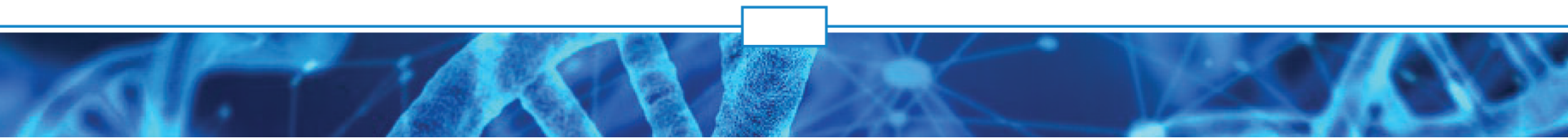
Obesity	47	-	-	31	+	-	11	+	+	 MEDIUM
Trend of Overeating (Gluttony)	34	-	-	14	+	-	7	+	+	 MEDIUM
Celiac disease	15	-	-	0	+	-	0	+	+	 NORMAL
Mitochondrial Complex Deficiency 1	1	-	-	0	+	-	0	+	+	 NORMAL

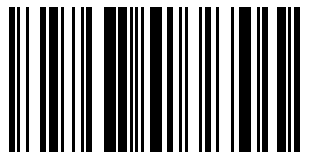
### Metabolic disorders

Homocystinuria	56	-	-	0	+	-	2	+	+	 NORMAL
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### Need for Nutrients

Apigenin	0	-	-	0	+	-	1	+	+	 HIGH
Iodine	64	-	-	13	+	-	4	+	+	 MEDIUM





Reaction to Glutamate 1 - - 1 + - 0 + +  NORMAL

### Neurodegenerative diseases

Parkinson's disease 16 - - 2 + - 2 + +  NORMAL


Alzheimer's disease 33 - - 10 + - 0 + +  NORMAL

Alzheimer's disease (early) 11 - - 0 + - 0 + +  NORMAL

Huntington's Disease 1 - - 0 + - 0 + +  NORMAL

### Neurological

BDNF 0 - - 1 + - 0 + +  HIGH

Reduced Dopamine Binding Sites in Brain 0 - - 1 + - 0 + +  HIGH

Sleep Quality 5 - - 0 + - 0 + +  NORMAL

### Pains


Fibromyalgia 1 - - 2 + - 1 + +  HIGH

Pain Sensitivity 0 - - 2 + - 1 + +  MEDIUM-HIGH

Migraine 7 - - 3 + - 2 + +  MEDIUM

Headache 1 - - 0 + - 0 + +  NORMAL

### Personal characteristics

Extraversion 0 - - 2 + - 2 + +  HIGH

Addiction to Heroin 1 - - 1 + - 0 + +  HIGH

Memory (long term, logic) 0 - - 0 + - 1 + +  MEDIUM-HIGH

Worst Verbal Communication in Autism 0 - - 0 + - 1 + +  MEDIUM-HIGH

Sociability 4 - - 1 + - 3 + +  MEDIUM-HIGH

Alcoholism 5 - - 6 + - 2 + +  MEDIUM-HIGH

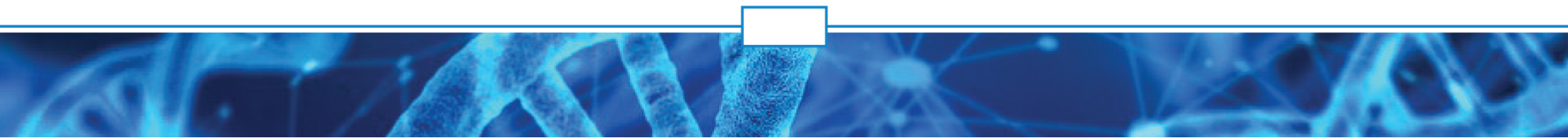
Self confidence 4 - - 2 + - 3 + +  MEDIUM

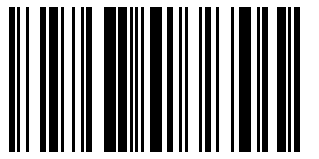
Night chronotype 1 - - 1 + - 0 + +  MEDIUM

Obsessive-Compulsive Disorder (OCD) 0 - - 1 + - 1 + +  MEDIUM

Physical resistance 22 - - 4 + - 4 + +  MEDIUM

Cognitive Flexibility 1 - - 2 + - 0 + +  MEDIUM





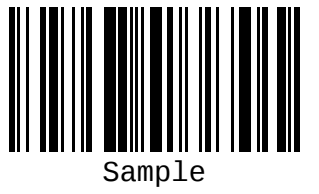
Memory	1	-	-	2	+	-	0	+	+	● MEDIUM
Hyperactivity	2	-	-	1	+	-	0	+	+	● MEDIUM
Attention Deficit Disorder with Food Colors	0	-	-	1	+	-	0	+	+	● MEDIUM
Hypothalamus Size (Smaller GG)	0	-	-	1	+	-	0	+	+	● NORMAL
Circadian Rhythm Impact	4	-	-	0	+	-	0	+	+	● NORMAL
Creativity	0	-	-	2	+	-	0	+	+	● NORMAL
Visuospatial Working Memory	2	-	-	1	+	-	0	+	+	● NORMAL
Musical Aptitude	3	-	-	1	+	-	0	+	+	● NORMAL
Increased Environmental Sensitivity	0	-	-	1	+	-	0	+	+	● NORMAL
Ability to Accept Criticism	1	-	-	0	+	-	0	+	+	● NORMAL
Cognitive empathy	1	-	-	0	+	-	0	+	+	● NORMAL
Facial Expression (Less Friendliness)	1	-	-	0	+	-	0	+	+	● NORMAL
Memory (traumatic)	0	-	-	1	+	-	0	+	+	● NORMAL
Memory (verbal)	1	-	-	0	+	-	0	+	+	● NORMAL
Tendency to sleep late	1	-	-	0	+	-	0	+	+	● NORMAL
Morning Chronotype	0	-	-	1	+	-	0	+	+	● NORMAL
Episodic memory	1	-	-	1	+	-	0	+	+	● LOW

### Provocative

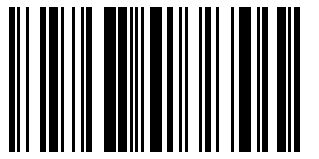
Oppositional defiant disorder (ODD)	1	-	-	2	+	-	1	+	+	● MEDIUM
Challenging behavior	2	-	-	0	+	-	0	+	+	● NORMAL

### Psychiatric


Willingness to avoid mistakes	0	-	-	1	+	-	0	+	+	● HIGH
Cocaine addiction	2	-	-	0	+	-	1	+	+	● HIGH
Cognitive skills, attention and memory	0	-	-	1	+	-	0	+	+	● HIGH
Opioid Dependence	0	-	-	1	+	-	0	+	+	● HIGH
Loneliness	1	-	-	1	+	-	1	+	+	● HIGH
Type D Personality	1	-	-	2	+	-	1	+	+	● HIGH
Response to Fluoxetine (Anti-depressant)	0	-	-	0	+	-	1	+	+	● MEDIUM-HIGH
Dyslexia	1	-	-	1	+	-	1	+	+	● MEDIUM-HIGH
Sleep disorder	5	-	-	0	+	-	1	+	+	● MEDIUM-HIGH



Autism (Asperger's Syndrome)	4	-	-	3	+	-	2	+	+	MEDIUM-HIGH
Psychosis with the use of marijuana	0	-	-	0	+	-	1	+	+	MEDIUM-HIGH
Openness to New Experiences	10	-	-	2	+	-	3	+	+	MEDIUM-HIGH
Panic Syndrome	1	-	-	4	+	-	1	+	+	MEDIUM-HIGH
Autism Spectrum Disorder (ASD)	25	-	-	1	+	-	10	+	+	MEDIUM-HIGH
Depression related to childhood abuse and trauma	0	-	-	0	+	-	1	+	+	MEDIUM-HIGH
Borderline Personality Disorder	0	-	-	1	+	-	0	+	+	MEDIUM
Alcohol addiction	4	-	-	1	+	-	1	+	+	MEDIUM
Tourette's Syndrome	3	-	-	0	+	-	1	+	+	MEDIUM
Trend to Less Attention	0	-	-	1	+	-	0	+	+	MEDIUM
Restless Legs Syndrome (Willis-Ekbom disease)	4	-	-	0	+	-	2	+	+	MEDIUM
Openness to new experiences (Feelings, Actions and Ideas)	3	-	-	2	+	-	0	+	+	NORMAL
Schizophrenia	25	-	-	6	+	-	1	+	+	NORMAL
Addiction to Tobacco	6	-	-	1	+	-	1	+	+	NORMAL
Suicidal tendencies and thoughts	8	-	-	2	+	-	0	+	+	NORMAL
Nicotine Dependence	4	-	-	1	+	-	0	+	+	NORMAL
Intelligence - IQ	6	-	-	0	+	-	0	+	+	NORMAL
Bipolar Disorder (Response to Lithium Treatment)	2	-	-	0	+	-	0	+	+	NORMAL
Epilepsy	13	-	-	0	+	-	0	+	+	NORMAL
Type A Personality	1	-	-	1	+	-	0	+	+	NORMAL
Seasonal Affective Disorder (SAD)	2	-	-	1	+	-	0	+	+	NORMAL
ADHD (Attention Deficit Hyperactivity Disorder)	7	-	-	5	+	-	0	+	+	NORMAL
Aggressiveness in children with ADHD	1	-	-	0	+	-	0	+	+	NORMAL
Anorexia Nervosa	2	-	-	0	+	-	0	+	+	NORMAL
Cataplexy and Narcolepsy (sleep)	1	-	-	0	+	-	0	+	+	NORMAL
Depression in Children with Autism	0	-	-	1	+	-	0	+	+	NORMAL
Late dyskinesia	0	-	-	1	+	-	0	+	+	NORMAL
Suicidal Thoughts Using Citalopram	2	-	-	0	+	-	0	+	+	NORMAL
Suicidal thoughts in teenagers with depression	1	-	-	0	+	-	0	+	+	NORMAL
Circadian Rhythm (nocturnal preference)	1	-	-	0	+	-	0	+	+	NORMAL



### Reasons for Conflict

Stress	2	-	-	0	+	-	1	+	+	 HIGH
Emotional Insensitivity	1	-	-	2	+	-	1	+	+	 HIGH
Difficulties in Dealing with Criticism	5	-	-	2	+	-	4	+	+	 MEDIUM-HIGH
Relationship Selectivity	0	-	-	3	+	-	1	+	+	 MEDIUM-HIGH
Addictions	0	-	-	0	+	-	1	+	+	 MEDIUM-HIGH
Greater Tendency to Lie	1	-	-	0	+	-	0	+	+	 MEDIUM

### Skeletal system (bones)

Development Defects	0	-	-	1	+	-	0	+	+	 MEDIUM
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### Sleep

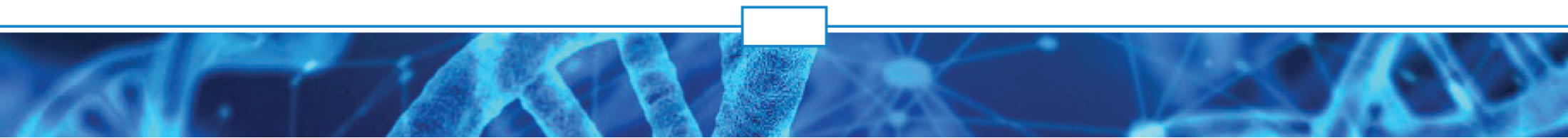
Chronic Fatigue Syndrome (CFS)	0	-	-	0	+	-	1	+	+	 HIGH
Caffeine Anxiety and Insomnia	2	-	-	0	+	-	3	+	+	 HIGH
Insomnia with Caffeine	6	-	-	1	+	-	3	+	+	 MEDIUM

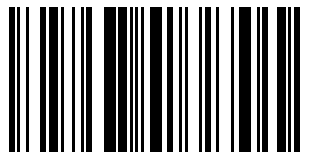
### Sports

Dance	0	-	-	1	+	-	0	+	+	 MEDIUM-HIGH
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### Weight

Binge Eating Disorder	0	-	-	2	+	-	0	+	+	 HIGH
Weight Management	1	-	-	0	+	-	1	+	+	 MEDIUM





## Aging

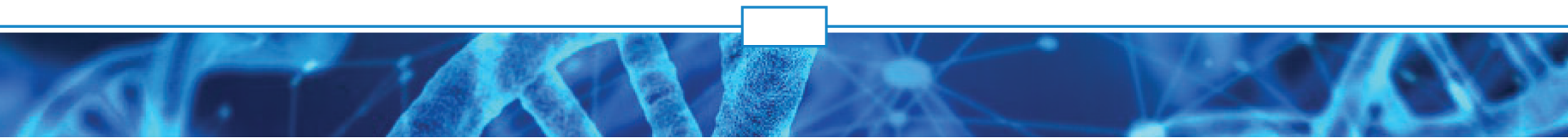
### Aging (quality)

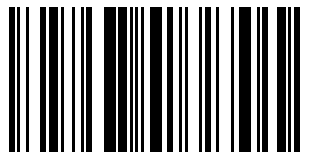


Aging, in human beings, is the process of wearing out the body. Results in orange and/or red indicate greater aging.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
APOB	rs676210	GG+	A,T	- -	●
APOB	rs1367117	GG+	A	- -	●
B3GALT1	rs13020412	AA+	G	- -	●
CDKN2A	rs3731249	GG-	A,G,T	- -	●
CETP	rs5882	AG+	A	+ -	●
CFH	rs1061147	AC+	C	+ -	●
DEF8	rs4268748	TT+	C	- -	●
ERI1	rs96621	CC+	C	- -	●
HDAC4	rs3791406	CT+	C	+ -	●
INTERGENIC	rs9287638	AC+	A	+ -	●
INTERGENIC	rs12661968	CC+	C	+ +	●
IRF4	rs12203592	CC+	T	- -	●
KL	rs9536314	TT+	A,G	- -	●
MC1R	rs1805005	GG+	T	- -	●
MC1R	rs1805007	CC+	A,G,T	- -	●
MC1R	rs1805008	CC+	T	- -	●
MC1R	rs1805009	GG+	A,C	- -	●
PPARG	rs17036170	GG+	A	- -	●
SLC45A2	rs185146	CC+	T	- -	●
UCP2	rs660339	CC-	T	- -	●

## Allergies





















## Asthma

 MEDIUM

A condition in which a person's airways become inflamed, narrow and swollen, in addition to producing extra mucus, which makes breathing difficult.





Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADRB2	rs1042713	GG+	A		
ADRB2	rs1800888	CC+	T		
GLCCI1	rs37973	GG+	A,C		
GSDML	rs7216389	CC+	T		
GSTP1	rs1695	AA+	G		
IL-10	rs1800896	AG-	C		
TLR4	rs4986791	CC+	T		
TNF	rs1800629	GG+	A		

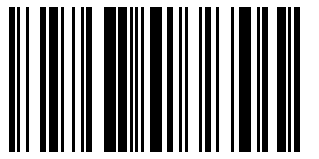
## Amino acids

### 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		
SLC7A2	rs56335308	GG+	A		



## 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	GG+	G		
PHGDH	rs121907987	GG+	A		
PHGDH	rs121907988	GG+	A		
PHGDH	rs267606949	CC+	A,G,T		

## Behavioral

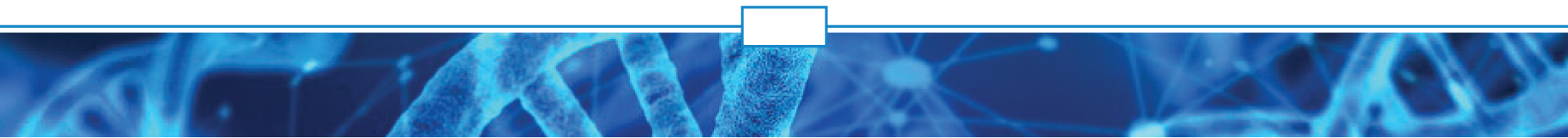
### Memory (Best)

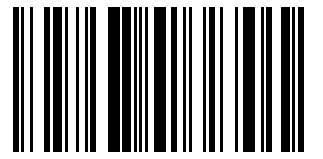
 HIGH

The concepts of good memory have changed, those considered to have excellent memories are able to remember a trivial conversation, but do not remember where they put the car keys. There is also a third key to understanding memory - it is contaminated by all the knowledge we have accumulated.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
TOMM40	rs157582	GG-	T		

## Behavioral Changes























## Impulsivity

 HIGH



















In psychology, impulsiveness is an impulse or tendency to act, in which the behavior has little or no prior thought or reflection. Impulsiveness, therefore, often leads to risky behavior.

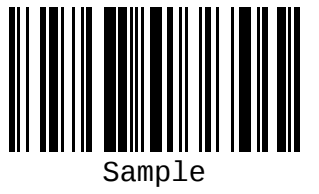
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		
BDNF	rs6265	AG-	T		
COMT	rs4680	AG+	A		
HTR1A	rs6295	CC-	G		
HTR1B	rs13212041	TT+	T		
HTR2A	rs6311	CT+	C		
HTR2A	rs6313	CT-	A		
NRXN3	rs11624704	CC+	C		
OPRM1	rs1799971	AG+	G		

## Obsessive behavior

 HIGH

Although possessiveness, excessive jealousy, and obsession are feelings commonly associated with romantic relationships, they can manifest themselves in any type of relationship. In general, individuals who develop an obsession with someone are those who have a very strong fear of abandonment and rejection, a fear that is usually associated with experiencing situations of rejection during childhood - which can be real or just interpretive. People with Obsessive Behavior tend to demand too much and leave no room for other interests and needs.





Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHADL	rs9611519	CC+	T		
DBH	rs1611115	TT+	C		
FAM86B3P	rs2945232	CC+	C		
INTERGENIC	rs6047641	GG+	A,G		
INTERGENIC	rs10456089	GG+	A		
PTPRF	rs2039528	AG+	G		
SNAP25	rs362584	AG+	A		
TMEM16D	rs1849710	CC+	C		
XKR6	rs6981523	CC+	T		



## Mood Disorder

 HIGH























It is a certain state of mind whose intensity represents the degree of disposition and psychological and emotional well-being of an individual. The word humor originated in humoral medicine from the ancient Greeks. In those times, the term humor represented any of the four bodily fluids (or humors) - blood, phlegm, yellow bile and black bile - that were considered to be responsible for regulating human physical and emotional health.

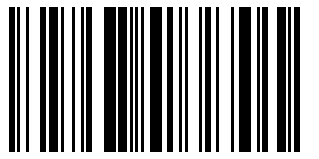
Gene	RSID	Genotype	Minor Allele	Alteration	Result
MTHFR	rs1801131	CC-	G		
OXTR	rs2254298	GG+	A		

## Neuroticism

 HIGH

Freud originally used the term neurosis to describe a condition marked by mental distress, emotional distress, and an inability to deal effectively with the normal demands of life. He suggested that we all show some signs of neurosis, but that we differ in our degree of suffering and our specific symptoms of distress. Today, neuroticism refers to the tendency to experience negative feelings. Those who score high on Neuroticism may primarily experience a specific negative feeling, such as anxiety, anger, or depression, but they likely experience many of these emotions. People with a high level of neuroticism are emotionally reactive. They respond emotionally to events that would not affect most people, and their reactions tend to be more intense than usual. They are more likely to interpret common situations as threatening, and small frustrations as hopelessly difficult. Their negative emotional reactions tend to persist for unusually long periods, which means they are generally in a bad mood. These problems in emotion regulation can diminish the neurotic's ability to think clearly, make decisions, and deal effectively with stress. At the other end of the scale, individuals with low neuroticism scores are less upset and less emotionally reactive. They tend to be calm, emotionally stable and free from lingering negative feelings. The absence of negative feelings does not mean that low scorers experience many positive feelings; The frequency of positive emotions is a component of the Extraversion domain. Results in orange or red indicate people who are more nervous, tense, insecure, worried. Results in green indicate calmer, relaxed, secure and resilient people.



Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHADL	rs9611519	CC+	T		
DBH	rs1611115	TT+	C		
DRD1	rs686	AA+	A,C,T		
FAM86B3P	rs2945232	CC+	C		
INTERGENIC	rs6047641	GG+	A,G		
INTERGENIC	rs10456089	GG+	A		
PTPRF	rs2039528	AG+	G		
SLC18A1	rs1390938	GG+	A		
SNAP25	rs362584	AG+	A		
TMEM16D	rs1849710	CC+	C		
XKR6	rs6981523	CC+	T		



## Borderline Syndrome

 MEDIUM-HIGH











Also called borderline personality disorder, it is characterized by sudden mood swings, fear of being abandoned by friends, and impulsive behaviors such as uncontrollably spending money or binge eating. This behavior begins to manifest itself in adolescence and becomes more frequent in early adulthood.

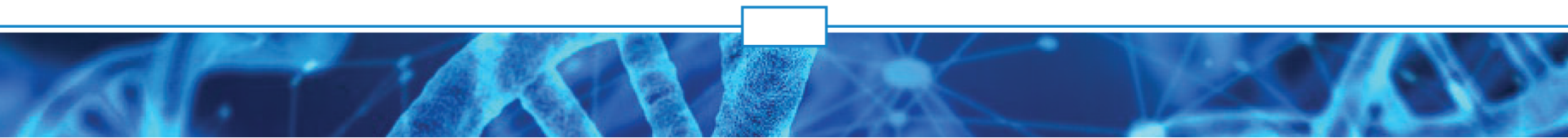
Gene	RSID	Genotype	Minor Allele	Alteration	Result
MAOA	rs6323	GG+	T		

## Aggressiveness

 MEDIUM-HIGH

Presence of the aggressiveness gene known as "Warrior". Aggression is an emotional behavior that is part of people's affectivity. The way of reacting to it varies a lot from individual to individual. As a defense mechanism present in the heart of all human beings, even in those we consider more evolved, we often try to repress it, ignoring it, as if not talking about it would make it disappear. Most of the time, we avoid even admitting its existence within us, because we fear it. This aggressive force is accepted and even encouraged in our society when it drives us to act, to take initiative, to make decisions, but this same force is impeded and repressed when it triggers in the individual attitudes of hostility towards another being. When a person finds himself in a situation of conflict, faced with an inadequate posture that they witnesses, where an attitude is necessary, they perceives this aggressive force within them, moving, sometimes, even with indignation at what is happening. Preferring to repress their aggression, they do not act, choosing to assume an attitude of omission in the face of the fact. On the other hand, this aggressive potential can be perceived in the other person, to whom something is going to be said, and it is omitted to avoid a hostile reaction. In the future, when faced with confrontational situations, will tend to repeat this omitted behavior. Expressing aggression does not mean reacting by attacking the other, but rather positioning yourself without fear, having the courage to speak your mind and not giving in to pressure from the people around you.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DBH	rs1611115	TT+	C		
HTR2A	rs6311	CT+	C		
MAOA	rs6323	GG+	T		
MAOA	rs909525	GG-	T		
MAOA	rs1137070	TT+	C		





## Shyness



Shy people are not always withdrawn. Therefore, many shy people are considered extroverts at different times. There are people who feel closed in any social contact, but many manage to separate the situations, for example, they don't like parties, but they have no problems with group work, or they don't speak in public, but they get along well in social environments and can express yourself calmly to various people. Many people confuse the concepts of shy and introverted, but actually each one of them means something different. Shyness, shyness and withdrawal are signs of people who feel inhibited and very uncomfortable in specific situations of social interaction. This type of feeling can interfere with personal contact and relationships as a whole, including at work. In this way, it is difficult to achieve personal and professional goals for those who suffer from it.

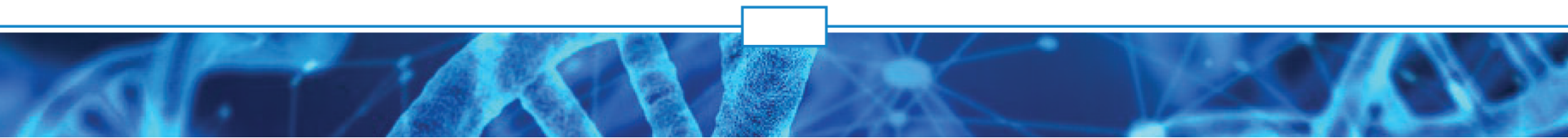
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A	<span style="color:red">+</span> <span style="color:green">-</span>	<span style="color:yellow">●</span>
BDNF	rs6265	AG-	T	<span style="color:red">+</span> <span style="color:green">-</span>	<span style="color:red">●</span>
CLOCK	rs1801260	TT-	G	<span style="color:green">-</span> <span style="color:green">-</span>	<span style="color:green">●</span>
CLOCK	rs6832769	AA+	G	<span style="color:green">-</span> <span style="color:green">-</span>	<span style="color:green">●</span>
DBH	rs1611115	TT+	C	<span style="color:red">+</span> <span style="color:red">+</span>	<span style="color:red">●</span>
MAOA	rs6323	GG+	T	<span style="color:red">+</span> <span style="color:red">+</span>	<span style="color:orange">●</span>
MAOA	rs909525	GG-	T	<span style="color:red">+</span> <span style="color:red">+</span>	<span style="color:orange">●</span>
MAOA	rs1137070	TT+	C	<span style="color:green">-</span> <span style="color:green">-</span>	<span style="color:green">●</span>
OXTR	rs237885	TT+	G	<span style="color:green">-</span> <span style="color:green">-</span>	<span style="color:green">●</span>
PDSS2	rs13202332	GG+	T	<span style="color:green">-</span> <span style="color:green">-</span>	<span style="color:green">●</span>

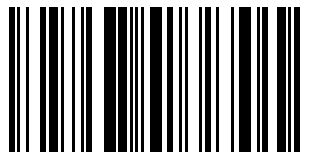
## Social Anxiety Disorder (Social Phobia)



It is an anxiety disorder described in the DSM-IV, characterized by manifestations of alarm, nervous tension, fear and discomfort triggered by exposure to social assessment.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
RGS2	rs4606	CC+	G	<span style="color:green">-</span> <span style="color:green">-</span>	<span style="color:yellow">●</span>





## Bipolar disorder

 MEDIUM

Disorder associated with mood swings ranging from depression to episodes of obsession.

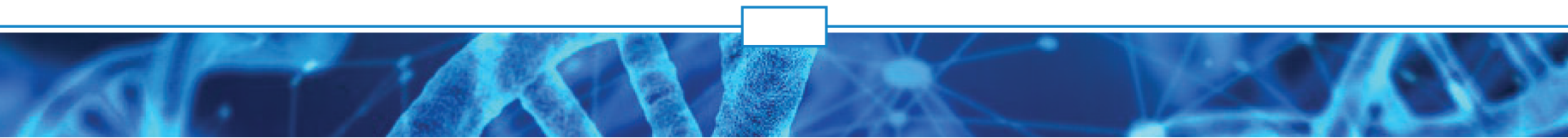
Gene	RSID	Genotype	Minor Allele	Alteration	Result
BCR	rs140504	GG+	G		
CACNA1C	rs1006737	GG+	A		
CACNA1C	rs2159100	CC+	A,G,T		
CSNK1E	rs1534891	CC+	C		
DGKH	rs1012053	AA+	A		
FKBP5	rs7757037	GG+	A,C,T		
INTERGENIC	rs4027132	AA+	A,C,T		
INTERGENIC	rs7570682	GG+	A		
P2RX7	rs2230912	AA+	G		
PALB2	rs420259	TT-	C,G		
TPH2	rs4570625	GG+	G		
TPH2	rs11178997	TT+	A		
TPH2	rs17110563	CC+	T		

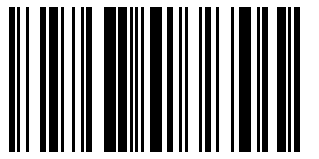
## Anger

 NORMAL

For a new line of studies, the root of anger is in the genes: genetic alterations would affect the body's hormonal circuits, making some respond more violently than others to everyday problems. In this way, the difficulty in controlling the feeling should not be interpreted as a result of a personality shaped only by environmental and psychological factors. The weight of genetics in the way each person processes rabies has been the subject of research and may be related to heart disease and hypertension. Orange or red result indicates susceptibility to more anger.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FYN	rs2148710	CC+	T		
HTR2A	rs6311	CT+	C		
SHISA6	rs11656526	CC+	T		









## Explosive temper

 NORMAL

O temperamento explosivo não só prejudica a sua saúde como também afeta os relacionamentos interpessoais. Claro que, às vezes, é normal perder a paciência, mas tudo tem um limite. Viver exaltado, gritando e brigando constantemente com as pessoas que o cercam está longe de ser um comportamento normal. Lembre-se de que tais ações vão contaminar as suas interações - tanto no ambiente profissional, como na esfera social. Pessoas que têm o pavio curto, por exemplo, são deixadas de lado e acabam isoladas. Mas não é só isso. A falta de capacidade de administrar o nervosismo gera problemas para a sua saúde mental e física, como depressão e aumento da pressão arterial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FYN	rs2148710	CC+	T		
INTERGENIC	rs6954895	TT+	C,G		

## Aggressiveness with alcohol consumption

 UNDEFINED

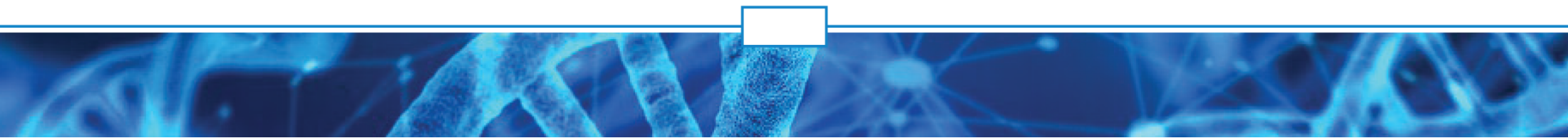
Dramatic mood swings while drinking alcohol are normal, but for some people, drinking leads to aggressive, unpleasant, and violent behavior. The prefrontal cortex is involved in studies on aggression caused by alcohol consumption. However, scientists at the University of New South Wales, who conducted the studies, have produced tangible empirical evidence in the form of high-quality functional MRI images of the brain that support this view. Approximately 35% to 66% of violent crimes involve alcohol consumption—these offenses range from murder, domestic violence to physical assault. Less seriously, drinking makes them a little meaner than usual, critical thinking becomes more incisive, anger becomes more palpable, and tolerance for frustration disappears. What is responsible for this is the combination of drinking and potentially hostile, unwanted, and tense situations — in addition to that, a personality that has a “disposition to aggressiveness” (ie, an impulse towards violent behavior). Alcohol acts as a lubricant that facilitates this underlying aggression. This new study was an effort to learn more about this “lube”, where it is located in the brain and how it works.

## Externalizing behavior

 UNDEFINED

Externalizing behaviors can be related to attention problems and aggressive behavior. They cause widespread negative conflicts in the environment, changing the course of proximal processes, since they completely alter motor acts. Examples include aggression, agitation, explosive attitudes, acting on impulse, defiant and antisocial characteristics (lying, skipping school, stealing, fighting and acting hostile in relationships, disrespecting limits and being provocative), and behaviors that generate rejection from parents, teachers, peers and spouses. Disruptive Behavior Disorders, a framework that includes the diagnoses of Attention Deficit Hyperactivity Disorder, Conduct Disorder and Oppositional Disorder, and the increase in their prevalence in children and adolescents, constitute a problem that has been growing and increasingly worrying today's societies. A child or young person with externalizing behavior is characterized by a persistent pattern of indiscipline marked by impulsive behaviors that have a negative impact on their environment, generally affecting academic performance and interpersonal relationships. Children affected by Conduct Disorder (CD), Oppositional Defiant Disorder (ODD) and Attention Deficit Hyperactivity Disorder (ADHD) are part of the spectrum of externalizing behavior disorders.

## Benefit





## Chamomile



Benefit from using chamomile to improve sleep quality, reduce anxiety and induce relaxation.

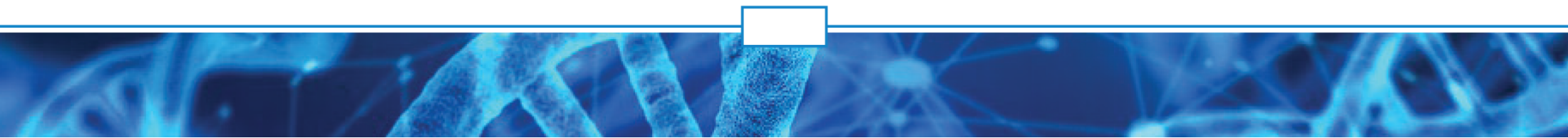
### Benefits

## Ability to Solve Problems



Having the ability to solve problems assertively is directly linked to the development of our emotional intelligence. This component is essential for making a correct analysis of the situation and choosing the best ways to conduct its outcome. Reactive people, who act impulsively, are also those who have more difficulties when it comes to solving their dilemmas. In these cases, most of the time, they prefer to outsource the responsibilities or let the problems "take care of themselves". That's a big mistake! Because this means that the problems will gain more intensity and it will become more and more difficult to find a solution. Facing problems is a healthy and mature attitude. Results in red means beneficial

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A	+ -	●
BDNF	rs6265	AG-	T	+ -	●
CHADL	rs9611519	CC+	T	+ +	●
COMT	rs4680	AG+	A	+ -	●
HTR1A	rs6295	CC-	G	+ +	●
HTR1B	rs13212041	TT+	T	+ +	●
HTR2A	rs6311	CT+	C	+ -	●
HTR2A	rs6313	CT-	A	+ -	●
NRXN3	rs11624704	CC+	C	- -	●
OPRM1	rs1799971	AG+	G	+ -	●
VDR	rs2228570	CC-	C,T	+ +	●
XKR6	rs6981523	CC+	T	- -	●





## Emotional maturity

 MEDIUM-HIGH

Emotionally mature people, in general, have the following characteristics: They look at the emotional past without pain; They are aware of what they think and know, making our own feelings and those of others better understood; Usually does not complain; They can be empathetic without being influenced by the emotions of others; They don't punish themselves for their mistakes; They learned to open up emotionally. Results in red is beneficial.

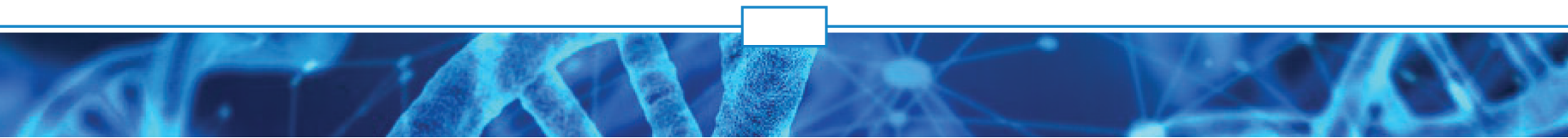
Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHADL	rs9611519	CC+	T		
DBH	rs1611115	TT+	C		
DRD2	rs6277	CC-	A		
FAM86B3P	rs2945232	CC+	C		
INTERGENIC	rs6047641	GG+	A,G		
INTERGENIC	rs10456089	GG+	A		
OXTR	rs2254298	GG+	A		
PTPRF	rs2039528	AG+	G		
SNAP25	rs362584	AG+	A		
TMEM16D	rs1849710	CC+	C		
XKR6	rs6981523	CC+	T		

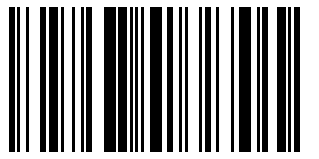
## Resilience

 MEDIUM

Resilience is the individual's ability to deal with problems, adapt to changes, overcome obstacles or resist the pressure of adverse situations - shock, stress, some type of traumatic event, among others. Without getting into a psychological, emotional or physical outbreak, for finding strategic solutions to face and overcome adversity. In organizations, resilience is about making a decision when someone is faced with a context between the tension of the environment and the will to win. These decisions provide a person with strategic strengths to face adversity. Results in red indicate greater resilience.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHADL	rs9611519	CC+	T		
DBH	rs1611115	TT+	C		
FAM86B3P	rs2945232	CC+	C		
INTERGENIC	rs6047641	GG+	A,G		
INTERGENIC	rs10456089	GG+	A		
PTPRF	rs2039528	AG+	G		
SNAP25	rs362584	AG+	A		
TMEM16D	rs1849710	CC+	C		
XKR6	rs6981523	CC+	T		










## Optimism

 MEDIUM





Optimism is the willingness to face things on the positive side and always hope for a favorable outcome, even in very difficult situations. The graph opposite indicates the genetic predisposition to be more optimistic. Results in red is beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T		
COMT	rs4680	AG+	A		
OXTR	rs53576	AG+	A		

## Empathy

 LOW

Empathetic people have a great advantage within companies and institutions, whether they are leaders or collaborators. They can see beyond appearances and the environment in which they find themselves and are willing to identify and connect with those around them. The term "empathy" refers precisely to this: in the process of identifying an individual, one must put oneself in their shoes. It is not enough to judge what someone did or did not do: it is necessary to understand the social circumstances that led to the result studied, both to understand the situation and to subsequently improve the person's result. Empathetic people have a high "humanity rate", which is not normally associated with the most exact sciences, high profitability or management of exclusively material resources. Results in orange or red indicate a higher degree of empathy.

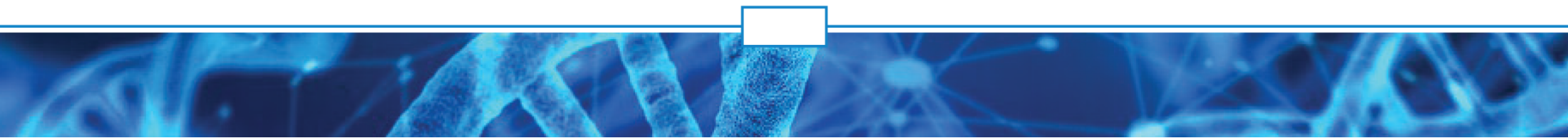
Gene	RSID	Genotype	Minor Allele	Alteration	Result
OXTR	rs53576	AG+	A		
OXTR	rs13316193	TT+	C		

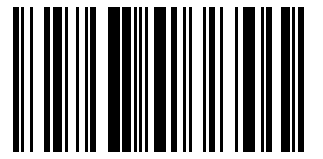
## Greater Resistance to Stress

 UNDEFINED

It indicates having greater resistance to stress, that is, people who are less stressed. Results in red means beneficial.

## Cancer












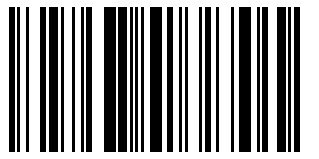


## Neoplasms (General Risk)

 MEDIUM

A disease in which abnormal cells divide uncontrollably and destroy body tissue. The results indicates the genetic predisposition to developing different types of cancer.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA1	rs1883025	GG-	T		
ALDH2	rs671	GG+	A		
ATM	rs664143	CC-	G,T		
BCO1	rs12934922	TT+	G,T		
CDKN1A	rs1801270	CC+	A,T		
CLPTM1L	rs401681	CT+	T		
CYP1A1	rs1800031	TT-	G		
CYP1A1	rs41279188	CC-	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	CC+	G,T		
E2F3	rs1570155	AG+	A,T		
EPHX1	rs1051740	CC+	C		
EPHX1	rs2234922	AA+	G,T		
FASLG	rs763110	CT+	T		
G6PD	rs1050828	GG-	T		
GPX1	rs1050450	CC-	A		
GSTP1	rs1695	AA+	G		
MIR146A	rs2910164	CG+	G		
MTHFR	rs1476413	AA-	G,T		
MTHFR	rs1801131	CC-	G		
MTHFR	rs1801133	CC-	A		
MTRR	rs1801394	AG+	G		
PTEN	rs121909229	GG+	A,C,T		
PTEN	rs121909232	CC+	G		
RNASEL	rs3738579	TT-	G		
SLC39A6	rs1050631	CC-	A		



SOD2	rs4880	CT-	G	<span style="background-color: red; color: white; padding: 2px;">+</span> <span style="background-color: green; color: white; padding: 2px;">-</span>	<span style="color: green; font-size: 1.2em;">●</span>
TERT	rs2736098	AG-	T	<span style="background-color: red; color: white; padding: 2px;">+</span> <span style="background-color: green; color: white; padding: 2px;">-</span>	<span style="color: green; font-size: 1.2em;">●</span>
XPC	rs2228000	CC-	A	<span style="background-color: green; color: white; padding: 2px;">-</span> <span style="background-color: green; color: white; padding: 2px;">-</span>	<span style="color: green; font-size: 1.2em;">●</span>
XRCC1	rs1799782	CC-	A	<span style="background-color: green; color: white; padding: 2px;">-</span> <span style="background-color: green; color: white; padding: 2px;">-</span>	<span style="color: green; font-size: 1.2em;">●</span>

## Dentistry

### Bruxism

MEDIUM

Bruxism is the habit of pressing and grinding your teeth during sleep, whether or not you produce sounds.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DRD1	rs686	AA+	A,C,T	<span style="background-color: green; color: white; padding: 2px;">-</span> <span style="background-color: green; color: white; padding: 2px;">-</span>	<span style="color: green; font-size: 1.2em;">●</span>
DRD3	rs6280	CC+	T	<span style="background-color: red; color: white; padding: 2px;">+</span> <span style="background-color: red; color: white; padding: 2px;">+</span>	<span style="color: orange; font-size: 1.2em;">●</span>
HTR2A	rs6313	CT-	A	<span style="background-color: red; color: white; padding: 2px;">+</span> <span style="background-color: green; color: white; padding: 2px;">-</span>	<span style="color: green; font-size: 1.2em;">●</span>

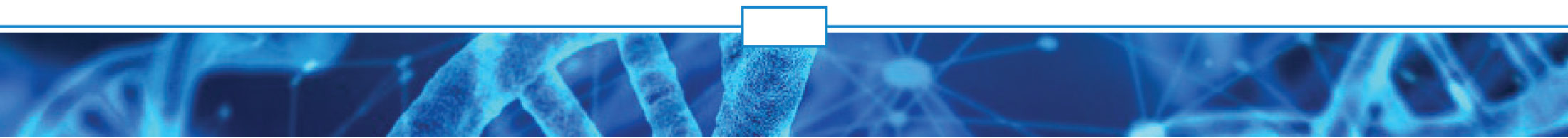
## Drug Reactions

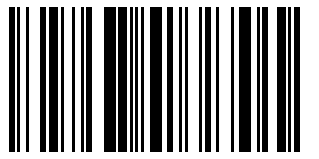
### Extrapyramidal Symptom with Risperidone

HIGH

Symptoms or extrapyramidal side effects are several movement disorders, the main one being known as tardive dyskinesia (irregular and involuntary muscle movements, usually in the face) and may result from the consumption of dopaminergic antagonists, usually antipsychotic (neuroleptic) drugs, which are often used to control psychosis. The most common antipsychotic associated with extrapyramidal symptoms is Risperidone. Risperidone is a potent atypical antipsychotic. It is most often used in the treatment of delusional psychoses, including schizophrenia. However, risperidone, like other atypical antipsychotics, is also used to treat some forms of bipolar disorder, depressive psychosis, obsessive-compulsive disorder and Tourette's syndrome. In the United States of America it has also been approved for the symptomatic treatment of irritability in autistic children and adolescents. For the treatment of autism spectrum disorders and milder forms of autism it is not recommended due to its side effects.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DRD3	rs167771	GG+	A,T	<span style="background-color: red; color: white; padding: 2px;">+</span> <span style="background-color: red; color: white; padding: 2px;">+</span>	<span style="color: red; font-size: 1.2em;">●</span>













## Response to Antidepressants

 HIGH


Some people respond better or worse to antidepressants. Orange or red results indicate greater response. The activating T (A) allele of the functional polymorphism rs334558 was significantly associated with remission when all types of antidepressants were included. This association continued as a trend when only patients using selective serotonin reuptake inhibitors were considered. Results in red is beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCB1	rs2032583	TT-	G		
ABCB1	rs3213619	CT-	G		
GSK3B	rs334558	AG+	A		
HTR2A	rs6311	CT+	C		

## Best Response to Citalopram

 MEDIUM-HIGH



Patients with the CC genotype and major depressive disorder may have a better response when treated with citalopram compared with patients with the TT genotype. Other genetic and clinical factors may also influence the response to citalopram.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs7103411	CT+	T		

## Reactions with the use of antidepressants (SSRI)

 NORMAL

Selective Serotonin Reuptake Inhibitors (SSRI or SSRI) are a class of drugs used to treat depressive syndromes, anxiety disorders and some types of personality disorders. Some examples of commonly used SSRIs include: Fluoxetine (prozac), Sertraline, Fluvoxamine, Paroxetine, Citalopram, Escitalopram. The rs6311 polymorphism may indicate an increased risk of sexual dysfunction with the use of SSRI antidepressants.

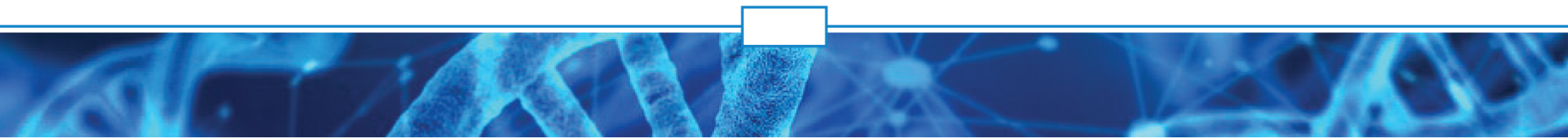
Gene	RSID	Genotype	Minor Allele	Alteration	Result
HTR2A	rs6311	CT+	C		

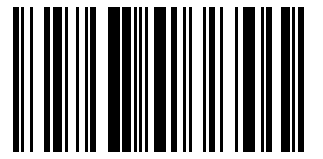
## Variation in sedative effects of Clozapine treatment

 UNDEFINED

Clozapine (active substance) is indicated to reduce the risk of recurrent suicidal behavior in patients with schizophrenia or schizoaffective disorder, when considered at risk of repeating suicidal behavior, based on history and recent clinical status. In case the patient presents this polymorphism (results in orange or red), we recommend further analysis of the effects of treatment with Clozapine in this patient.

## Endocrine system




















## Autoimmune Thyroid Disease

 MEDIUM














































Predisposition to autoimmune thyroid disease, whether Graves' or Hashimoto's disease.

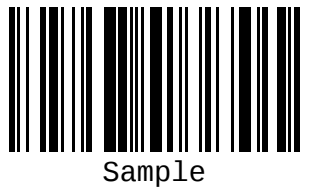
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABO	rs657152	GG-	T	 	
CTLA4	rs231775	AA+	G	 	
DIO1	rs2235544	CC+	A,T	 	
MTNR1B	rs1387153	TT+	C,T	 	
NFIA	rs334699	GG+	G	 	

## Hypothyroidism

 NORMAL

Predisposition to insufficient production of thyroid hormones.



Gene	RSID	Genotype	Minor Allele	Alteration	Result
DIO1	rs2235544	CC+	A,T	 	
DIO1	rs11206244	CC+	T	 	
FGF7	rs4338740	TT+	C	 	
HLA	rs2517532	CT-	G	 	
INSR	rs4804416	TT+	G	 	
INTERGENIC	rs10162002	GG+	A	 	
INTERGENIC	rs10961534	AA+	G	 	
IYD	rs121918139	TT+	C	 	
PDE8B	rs1382879	CC+	T	 	
PDE8B	rs4704397	AA+	A	 	
PHTF1	rs6679677	CC+	A	 	
SH2B3	rs3184504	CC+	A,C,G	 	
TG	rs35301433	AA+	G	 	
VAV3	rs4915077	TT+	C	 	
ZNF804B	rs10248351	TT+	C	 	



## T3

 NORMAL

T3 helps maintain muscle control, brain function and development, heart and digestive functions. It also plays a role in the body's metabolic rate and the maintenance of bone health. In blood tests, low T3 levels may mean you have hypothyroidism, a condition in which your body doesn't make enough thyroid hormone. T3 test results are often compared with T4 and TSH test results to help diagnose thyroid disease. If you have questions about your results, talk to your health care provider. Results in red or orange indicate tendency to low T3 levels.



Gene	RSID	Genotype	Minor Allele	Alteration	Result
DIO1	rs11206244	CC+	T		

## Genetic diseases

### Doors Syndrome

 NORMAL



Doors Syndrome is a disorder that involves several abnormalities present from birth (congenital). "DOORS" is an abbreviation in English for the main features of the disorder, including deafness; short or missing nails (onychodystrophy); short fingers and toes (osteodystrophy); developmental delay and intellectual disability (formerly called mental retardation); and convulsions. Some people with DOORS syndrome do not have all of these features. Most people with DOORS syndrome have profound hearing loss caused by changes in the inner ears (sensory deafness). Developmental delay and intellectual disability are also often severe in this disorder.

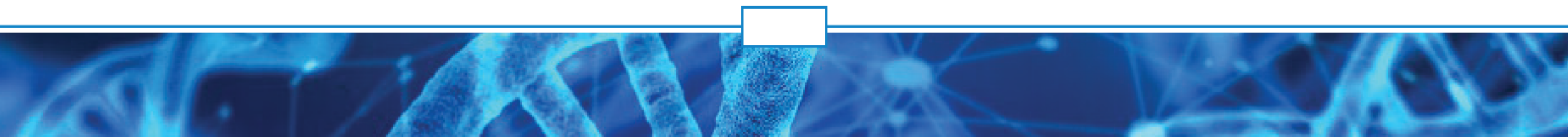
Gene	RSID	Genotype	Minor Allele	Alteration	Result
TBC1D24	rs398122965	CC+	T		

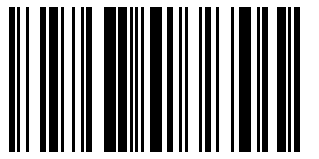
### Joubert Syndrome

 NORMAL

Joubert syndrome has an autosomal recessive inheritance and its main clinical features are hypotonia, ataxia, mental retardation, abnormal eye movements and changes in respiratory rhythm starting in the first months of life (periods of tachypnea alternating with apnea). The most characteristic radiological findings are elongation and narrowing of the pontomesencephalic junction, deepening of the interpeduncular fossa, thickening and horizontalization of the superior cerebellar peduncles, hypoplasia of the vermis, and incomplete fusion of the median vermis region that arises with an upper sagittal cleft.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
TMEM216	rs201108965	GG+			








## Hyperekplexia

 NORMAL

Hyperekplexia is a movement disorder that, despite being severe, is little studied, perhaps because of its low incidence compared to other existing ones. It manifests itself as a result of a mutation in the individual's glycine receptors. Its name, of Greek origin, means "exaggerated spasm". Thus, it consists of involuntary startle reactions in response to visual, tactile or auditory stimuli, such as loud noises. Such behavior is one of the fastest movements that our species can generate, from sensory stimuli. An exaggerated eye blink, grimaces, head bends, shoulder lifts and elbows, trunk and knees bending are its main features. In these sudden attacks, there may be an increase or loss of muscle tone, the former being the most common. The more tense or tired they are, the stronger the reaction. Due to the loss of postural control, the individual can fall after the spasms, which can lead to more serious consequences. Hip dislocation and hernias can occur over time as a consequence of muscle tension. It is usually hereditary, but there are cases in the literature of incidence without this type of relationship. Affected people, in most cases, are born with typical characteristics, such as stiffening of the muscles, especially around the shoulder, and a marked startle in situations such as those mentioned above. In these cases, the doctor may tap the tip of the baby's nose in order to check whether or not there is a specific reaction for this condition. In infants, movements may be followed by apnea and, at this stage of life, children may have difficulty swallowing and choke more easily. During sleep, spasms may disappear. However, there are cases in which the patient has sudden, repetitive and involuntary movements of the limbs, usually during peaceful sleep. Electroencephalograms are able to detect this disease. As for drugs, conazepam, ben

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GLRA1	rs116474260	CC+	T	 	

## Carpenter's Syndrome

 UNDEFINED










It is a rare genetic disease, which is among the group of acrocephalopolysyndactyly disorders.

## Hereditary diseases

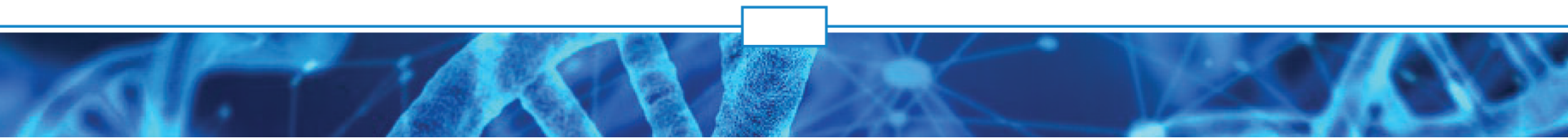
### Fragile X Syndrome

 NORMAL

Fragile X Syndrome, Escalante Syndrome or Martin & Bell Syndrome is the 2nd most common inherited cause of mental retardation, and it is also the most common known cause of autism. It is estimated to affect 1 in 4000 men and 1 in 6000 women, with 1 in 150 women carrying the FMR1 gene.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AFF2	rs1265404	GG+	A	 	
FMR1	rs25704	CC+	T	 	
FMR1	rs1805421	AA+	G	 	

## Hormones









## Adrenaline

 HIGH



Adrenaline or epinephrine is a sympathomimetic hormone and neurotransmitter responsible for preparing the body to perform great things, derived from the modification of an aromatic amino acid (tyrosine), secreted by the adrenal glands, so called because they are above the kidneys. In times of "stress", the adrenals secrete abundant amounts of this hormone that prepares the body for great physical efforts, stimulates the heart, raises blood pressure, relaxes certain muscles and contracts others. Result in red or orange indicates higher adrenaline serum concentrations in rest.

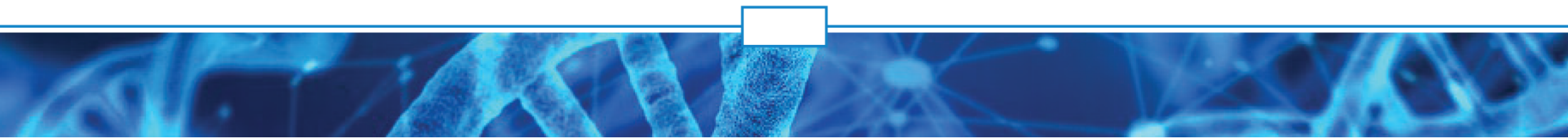
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ATP6V1B1	rs17720303	TT+	T		
COMT	rs737865	CT-	G		

## Neuropeptide Y (NPY)

 MEDIUM-HIGH

Neuropeptide Y (NPY) is a neurotransmitter and peptide hormone produced in various parts of the body, including the central nervous system, sympathetic nervous system, and digestive system. It has multiple functions in the body, including regulating appetite, mood, stress response, and blood pressure. Higher levels of NPY in the blood have been linked to conditions such as obesity, diabetes, Alzheimer's disease and cardiovascular disease. Studies have shown that NPY has a stimulating effect on appetite, increasing food intake and heightening the preference for foods high in fat and sugar. Furthermore, elevated NPY levels have also been associated with increased sympathetic nervous system activity, which can lead to increased blood pressure and a greater risk of cardiovascular disease. On the other hand, lower levels of NPY in the blood have been associated with conditions such as anxiety, depression and eating disorders such as anorexia nervosa and bulimia nervosa. Studies have shown that NPY has an anxiolytic and antidepressant effect, reducing anxiety and improving mood.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
NPY	rs16147	GG-	T		





## Estradiol

 MEDIUM

Estradiol is the most important estrogen for a woman. It is a hormone produced by the ovaries that acts on reproductive function, skin, blood vessels, bones and brain. According to studies, estradiol plays more than 300 functions in the female body. In reproduction, estradiol stimulates the release of eggs from the ovarian follicles. It also acts on the fallopian tubes, stimulating muscle contractions that take the fertilized egg to the uterus. Also in the reproductive function, estradiol promotes the reaction of the uterus to the hormone progesterone, whose function is to prepare the organ for the arrival of the fertilized egg, producing a thicker endometrium. Another important function of estradiol is to drive the development of secondary sexual characteristics, such as breast growth and body changes, affecting bones, joints and fat distribution. Estradiol is also responsible for maintaining skin elasticity, blood vessel dilation and bone health. In the brain, estradiol plays a significant role in protecting brain functions such as memory, mood and mental well-being. Estradiol levels change during a woman's menstrual cycle. It starts to increase in the middle of the follicular phase (when some ovarian follicles are stimulated) and peaks in the middle of the cycle. Until it starts to fall, reaching a second peak in the luteal phase (a phase in which the corpus luteum, the structure that remains in the ovary after the egg is released, produces progesterone). Orange or red result indicates higher estradiol. Results in red indicates higher production of estradiol- and could be beneficial.

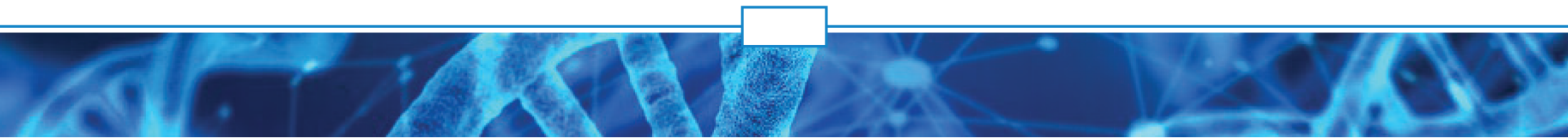
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ESR2	rs1256031	CC-	A,T		
SHBG	rs1799941	GG+	A		

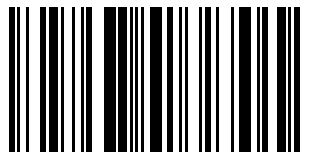
## Cortisol Level

 LOW

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	GG+	T		
FKBP5	rs1360780	CC+	A,C		
HSD11B1	rs846910	GG+	A		
HTR2C	rs6318	GG+	G,T		
OXTR	rs53576	AG+	A		





## Insecurities

### Fear Uncertainty

 MEDIUM-HIGH

The need to keep everything under control, whether it be thoughts, behaviors, or results, puts us in a state of constant alert, which often leads to a need to check every detail. Some people are more intolerant of uncertainty than others, creating anxiety and fear.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FYN	rs706895	TT+	T	++	

### Fears

 MEDIUM

Fear is a sensation that provides a state of alert demonstrated by the need to do something, usually because of feeling threatened, both physically and psychologically.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
STMN1	rs182455	CC-	G,T	--	

### Shame

 MEDIUM

Shame comes from a reflection on oneself and on a third party at the same time. An embarrassed person understands that he or she is being observed and evaluates his or her position according to the observer's gaze.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T	+-	
RGS2	rs4606	CC+	G	--	

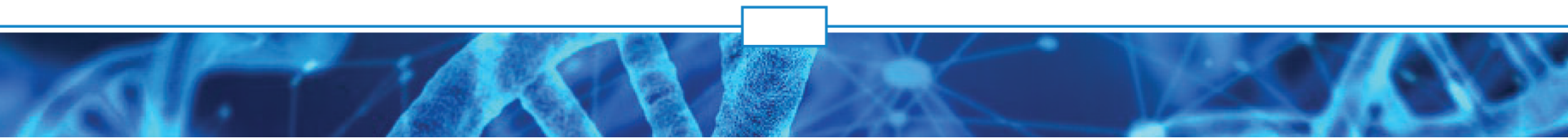
## Instability

### Migratory Behavior

 MEDIUM-HIGH

Behavior of always looking for change, for example housing, work and relationships.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DRD4	rs1800955	CC+	C,G	++	





## Explorative Behavior



Behavior associated with people who are always looking for new experiences in the most diverse areas of life.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DRD4	rs1800955	CC+	C,G	++	●

## Internalizations

### Emotional Negativity



Tendency to be more negative, such as: complaining a lot, looking for faults in people, belittling others. Result in orange or red indicates increased risk of being negative.

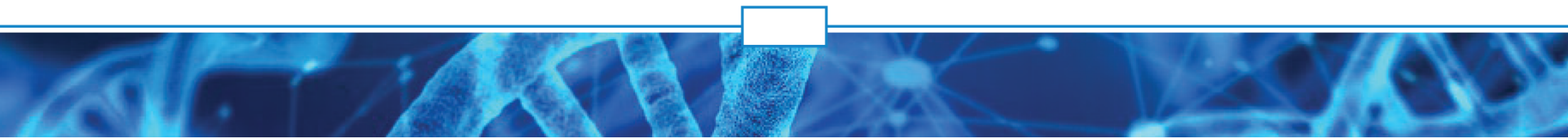
Gene	RSID	Genotype	Minor Allele	Alteration	Result
MAOB	rs1799836	AA-	A,C	++	●
MAOB	rs10521432	AA+	A	++	●

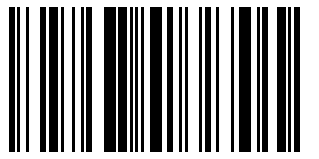
### Anxiety



Tendency to be an anxious person can be influenced by the polymorphisms of several genes. Results in red indicates the predisposition to develop this condition.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T	+ -	●
MAOA	rs909525	GG-	T	++	●
NGF	rs6330	CC-	A	- -	●
NGF	rs6330	CC-	A	- -	●
RGS2	rs4606	CC+	G	++	●
TPH2	rs4565946	TT+	A,G,T	- -	●
TPH2	rs4570625	GG+	G	++	●
TPH2	rs4570625	GG+	G	- -	●









## Internalizing Disorder

 MEDIUM





An internalizing disorder is a type of emotional and behavioral disorder along with externalizing disorders. One who suffers from an internalizing disorder will either keep his problems to himself or internalize the problems. Behaviors that manifest in people with internalizing disorders include depression, isolation, anxiety, and loneliness. There are also behavioral characteristics involved with internalizing disorders. Some behavioral abnormalities include: low self-esteem, decreased academic progress, and social withdrawal. Internalizing problems such as sadness can turn problems into bigger burdens such as social withdrawal, suicidal thoughts, and other physical symptoms.

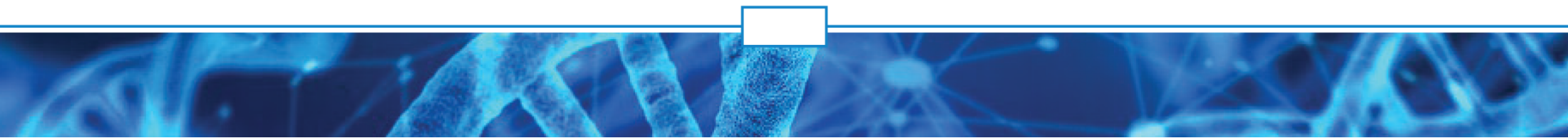
Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs2030324	CT-	G		
BDNF	rs10835210	AC+	A		

## Introversion

 MEDIUM

Introversion often affects the individual, making him shy, embarrassed or having difficulty expressing himself. The focus is on others and their possible criticisms and supposedly negative manifestations. Social contact is very draining and those who suffer from it feel that interacting with others drains energy. Being in a group is not a relaxing time. Being an introvert is a personal characteristic, it's a way of using attention, whether it's more on the person (introversion) or on the next person (extroversion). Those who focus too much attention on themselves often close themselves off and have difficulty in social interaction. On the other hand, those who are introspective are usually a good listener and attentive to the needs of others, as they can easily put themselves in someone else's shoes. Introverts, on the other hand, are people with little extraversion. They tend to be quiet, reserved and less involved in social situations. But it's important to note that introversion and shyness despite being close are not the same things. People with introversion are not afraid of social situations, they simply prefer to spend more time alone and don't need as much social stimulation.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T		
RGS2	rs4606	CC+	G		





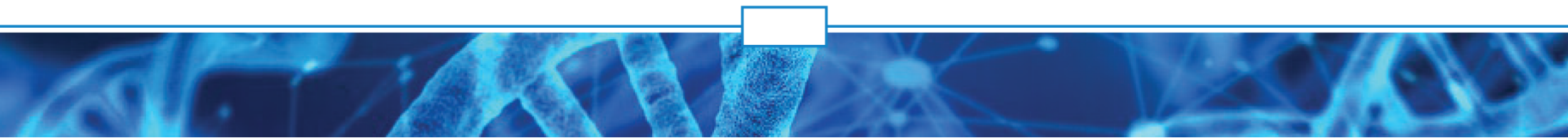
## Depression

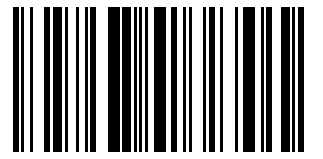


Mental disorder characterized by persistent depression or loss of interest in activities, significantly impairing daily life. It can trigger other illnesses and conditions, such as lack of appetite or excessive appetite. Results in red indicates the genetic predisposition to develop this condition.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T	<span style="background-color: red; color: white;">+</span> <span style="background-color: green; color: white;">-</span>	<span style="color: green;">●</span>
COMT	rs4680	AG+	A	<span style="background-color: red; color: white;">+</span> <span style="background-color: green; color: white;">-</span>	<span style="color: green;">●</span>
HTR1A	rs6295	CC-	G	<span style="background-color: green; color: white;">-</span> <span style="background-color: green; color: white;">-</span>	<span style="color: green;">●</span>
HTR2A	rs6311	CT+	C	<span style="background-color: red; color: white;">+</span> <span style="background-color: green; color: white;">-</span>	<span style="color: orange;">●</span>
TPH1	rs1800532	AC-	T	<span style="background-color: red; color: white;">+</span> <span style="background-color: green; color: white;">-</span>	<span style="color: green;">●</span>
TPH2	rs4570625	GG+	G	<span style="background-color: green; color: white;">-</span> <span style="background-color: green; color: white;">-</span>	<span style="color: green;">●</span>

## Metabolic








































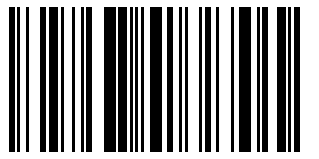
## Obesity

 MEDIUM

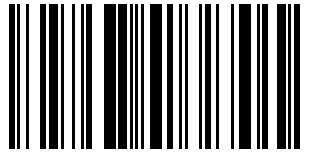
Here, we evaluated a set of genes whose polymorphisms were associated with a higher risk of developing obesity. Result in orange or red indicates a greater tendency to obesity.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADIPOQ	rs1501299	AC-	A		
ADRB2	rs1042714	GG+	C,T		
ADRB3	rs4994	CT-	G		
AGRP	rs5030980	GG-	T		
AKT1	rs1130214	TT-	C		
ANKK1	rs1800497	CT-	A		
APOA2	rs5082	CT-	A		
APOA5	rs662799	AA+	T		
APOB	rs5742904	GG-	A,T		
APOE	rs7412	CC+	T		
ARMC4	rs587777047	AA+	C		
ARMC4	rs587777049	GG+	T		
BDNF	rs925946	GG+	G		
BDNF	rs988712	GT+	G		
BDNF	rs4923461	AG+	C,G		
BDNF	rs10501087	CT+	C		
BICC1	rs11006263	AA+	G		
CCDC77	rs1048466	GG+	A,C		
CD46	rs35366573	CC+	T		
CDCA3	rs5443	CC+	T		
CLOCK	rs1801260	TT-	G		
CYP2E1	rs2031920	CC+	T		
CYP2E1	rs2070672	AA+	G		
CYP2E1	rs72559710	GG+	A,C,T		
DOCK8	rs6476030	AA+	G		
DOCK8	rs192864327	GG+	C,T		
FTO	rs1121980	CT-	A,C		
FTO	rs1421085	CT+	C		
FTO	rs1558902	AT+	A		
FTO	rs8050136	AC+	A		



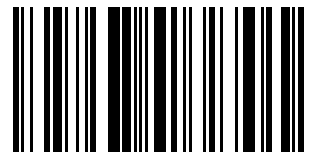


FTO	rs9939609	AT+	A	+ -	●
FTO	rs11642841	AC+	A	+ -	●
FTO	rs17817449	GT+	A,G	+ -	●
FTO	rs121918214	GG+	A	- -	●
GHRL	rs35680	AA-	C	- -	●
GHRL	rs4684677	TT+	T	- -	●
GHRL	rs34911341	CC+	T	- -	●
GHSR	rs509035	AG+	A	+ -	●
GHSR	rs572169	AG-	T	+ -	●
GHSR	rs2232165	CC-	A	- -	●
GHSR	rs2948694	AA+	G	- -	●
GPC5	rs2352028	CC+	G,T	- -	●
IL-1B	rs1143634	CC-	A	- -	●
IL-1RN	rs419598	TT+	C	- -	●
IL-6	rs1800797	GG+	G	- -	●
INSIG2	rs7566605	CC+	C	+ +	●
INTERGENIC	rs2051457	GG+	T	- -	●
INTERGENIC	rs7647305	CC+	C	+ +	●
KCNMA1	rs2116830	CC-	C	+ +	●
KIF6	rs9380880	GG+	A	- -	●
LEPR	rs1137101	AG+	G	+ -	●
LEPR	rs1805094	CG+	C	+ -	●
LEPR	rs1805134	CT+	C	+ -	●
LIPC	rs261332	AG+	G	+ -	●
LIPC	rs1800588	CT+	T	+ -	●
LPP	rs1152846	AG-	C	+ -	●
MC4R	rs10871777	AG+	G	+ -	●
MC4R	rs17782313	CT+	C	+ -	●
MC4R	rs52820871	TT+	G	- -	●
MSRA	rs545854	GG-	G	- -	●
NAT2	rs1208	AA+	G	- -	●
NAT2	rs1041983	TT+	T	+ +	●
NAT2	rs1799929	CC+	T	- -	●
NAT2	rs1801279	GG+	A	- -	●
NAT2	rs1801280	TT+	C	- -	●



NAT2	rs1805158	CC+	A,T	- -	●
PCDH9	rs17081231	AA+	G	- -	●
PCSK1	rs6232	AG-	C	+ -	●
PFKP	rs6602024	AG+	A	+ -	●
PLIN1	rs894160	AG-	T	+ -	●
POC5	rs2307111	AG-	T	+ -	●
PPARG	rs1801282	GG+	C	+ +	●
PPARG	rs3856806	TT+	T	+ +	●
PPARGC1A	rs8192678	GG-	T	- -	●
PTPRD	rs1975197	TT-	A	+ +	●
RYR2	rs1057517873	AA+	G	- -	●
SLC22A2	rs316019	GG-	C	- -	●
SLC22A2	rs8177507	GG-	G,T	- -	●
SLC22A2	rs8177516	CC-	A,T	- -	●
SLC22A2	rs8177517	AA-	C,G	- -	●
SLC29A3	rs121912583	GG+	A	- -	●
TCF4	rs9960767	AC+	C,G	+ -	●
TCF7L2	rs7903146	CT+	G,T	+ -	●
TMEM18	rs6548238	CC+	C	- -	●
TRAPPC9	rs267607137	CC-	A	- -	●
UCP2	rs659366	CC+	T	- -	●
UGT2B7	rs12233719	GG+	A,C,T	- -	●
UNC13A	rs12608932	CC+	C	+ +	●
WDR11-AS1	rs4783244	GT+	T	+ -	●

































































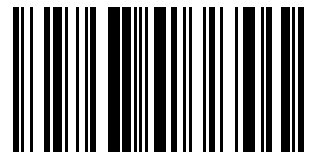


## Trend of Overeating (Gluttony)

 MEDIUM

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

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		
ARMC4	rs587777047	AA+	C		
ARMC4	rs587777049	GG+	T		
BICC1	rs11006263	AA+	G		
CCDC77	rs1048466	GG+	A,C		
CD46	rs35366573	CC+	T		
CDCA3	rs5443	CC+	T		
CYP2E1	rs2031920	CC+	T		
CYP2E1	rs2070672	AA+	G		
CYP2E1	rs72559710	GG+	A,C,T		
DOCK8	rs192864327	GG+	C,T		
FAM71F1	rs6971091	GG+	A		
FTO	rs1121980	CT-	A,C		
FTO	rs1421085	CT+	C		
FTO	rs9939609	AT+	A		
FTO	rs17817449	GT+	A,G		
FTO	rs121918214	GG+	A		
GPC5	rs2352028	CC+	G,T		
IL-1B	rs1143634	CC-	A		
INSIG2	rs7566605	CC+	C		
KIF6	rs9380880	GG+	A		
LEPR	rs1137101	AG+	G		
LIPC	rs261332	AG+	G		
LIPC	rs1800588	CT+	T		
LPP	rs1152846	AG-	C		
MAOA	rs909525	GG-	T		
MC4R	rs10871777	AG+	G		
NAT2	rs1208	AA+	G		
NAT2	rs1041983	TT+	T		
NAT2	rs1799929	CC+	T		
NAT2	rs1801279	GG+	A		



NAT2	rs1801280	TT+	C	- -	●
NAT2	rs1805158	CC+	A,T	- -	●
NGF	rs6330	CC-	A	- -	●
NMB	rs1051168	GG+	C,T	- -	●
PCDH9	rs17081231	AA+	G	- -	●
PCSK1	rs6232	AG-	C	+ -	●
PFKP	rs6602024	AG+	A	+ -	●
PPARG	rs3856806	TT+	T	+ +	●
PTPRD	rs1975197	TT-	A	+ +	●
RYR2	rs1057517873	AA+	G	- -	●
SLC22A2	rs316019	GG-	C	- -	●
SLC22A2	rs8177507	GG-	G,T	- -	●
SLC22A2	rs8177516	CC-	A,T	- -	●
SLC22A2	rs8177517	AA-	C,G	- -	●
SLC29A3	rs121912583	GG+	A	- -	●
TAS2R38	rs1726866	TT-	A	- -	●
TCF4	rs613872	TT+	T	- -	●
TCF4	rs9960767	AC+	C,G	+ -	●
TMEM18	rs6548238	CC+	C	- -	●
TPH2	rs4570625	GG+	G	- -	●
TRAPPC9	rs267607137	CC-	A	- -	●
UGT2B7	rs12233719	GG+	A,C,T	- -	●
UNC13A	rs12608932	CC+	C	+ +	●
WDR11-AS1	rs4783244	GT+	T	+ -	●



































## Celiac disease

 NORMAL



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	AA+	G		
HLA	rs4713586	TT-	G		
HLA-DPA1	rs2301226	GG+	A		
HLA-DQA1	rs2187668	GG-	A,G,T		
HLA-DQB1	rs7454108	TT+	C		
HLA-DQB1	rs7775228	TT+	C		
HLA-DRA	rs2395182	TT+	T		
IL-18RAP	rs917997	AA-	A,C		
KIAA1109	rs6822844	GG+	T		
KIAA1109	rs13119723	AA+	G		
MYO9B	rs2305764	TT-	A		
SH2B3	rs3184504	CC+	A,C,G		

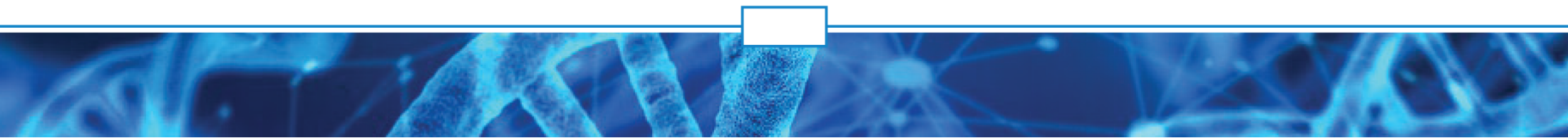
## Mitochondrial Complex Deficiency 1

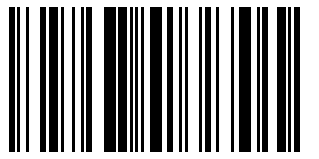
 NORMAL

Mitochondrial complex I deficiency is a deficiency (deficiency) of a protein complex called complex I or a loss of its function. Complex I is found in cell structures called mitochondria, which convert food energy into a form that cells can use. Complex I is the first of five mitochondrial complexes that carry out a multistep process called oxidative phosphorylation, through which cells obtain much of their energy. Deficiency of mitochondrial complex I can cause a wide variety of signs and symptoms that affect many organs and systems in the body, particularly the nervous system, heart, and muscles used for movement (skeletal muscles). These signs and symptoms can appear at any time from birth to adulthood.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
MTFMT	rs201431517	GG+			

## Metabolic disorders



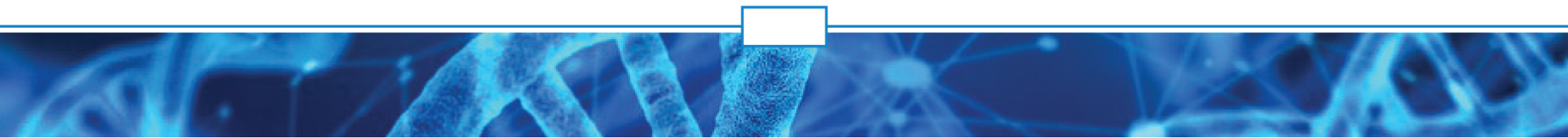


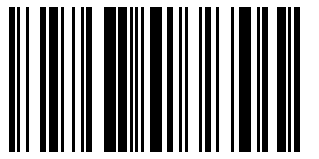
## Homocystinuria

 NORMAL

Homocystinuria, also called Cystathionine beta-synthase Deficiency (CBS), is a genetic disorder of the metabolism of the amino acid methionine, with frequent involvement of the enzyme cystathionine beta-synthase. It is a disease that can be detected in the heel prick test. CBS catalyzes the conversion of homocysteine to cystathionine, which is then converted to cysteine. Homocysteine and methionine build up. Signs and symptoms of homocystinuria include tall stature, intellectual disability, kyphosis, ectopic lens, and atherosclerosis.

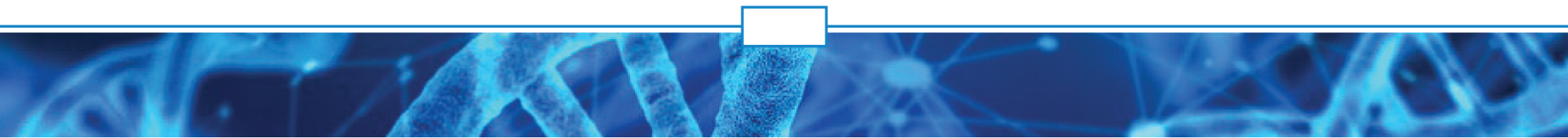
Gene	RSID	Genotype	Minor Allele	Alteration	Result
CBS	rs234706	GG+	A		
CBS	rs1789953	CC+	T		
CBS	rs2298758	GG+	A,C		
CBS	rs2851391	CC+	C		
CBS	rs5742905	TT-	G		
CBS	rs6586282	CC+	T		
CBS	rs28934891	GG-	T		
CBS	rs117687681	GG+	A		
CBS	rs121964962	GG-	A		
CBS	rs121964964	CC-	G		
CBS	rs121964965	GG-	A		
CBS	rs121964969	GG-	A		
CBS	rs121964970	GG-	A		
CBS	rs121964972	CC-	A		
CBS	rs121964973	CC-	T		
CBS	rs138211175	CC+	T		
CBS	rs139456571	GG+	A		
CBS	rs140002610	GG+	A		
CBS	rs147474549	CC+	G		
CBS	rs148865119	GG+	A		
CBS	rs149119723	GG+	A		
CBS	rs199948079	CC+	T		
CBS	rs372010465	CC+	T		
CBS	rs375846341	TT+	G		
CBS	rs398123151	CC-	T		
CBS	rs745704046	CC+	T		
CBS	rs758236584	GG+	A		
CBS	rs762065361	CC+	A		





CBS	rs763036586	CC+	T	- -	●
CBS	rs769080151	GG+	A	- -	●
CBS	rs770095972	CC+	A	- -	●
CBS	rs771298943	CC+	A	- -	●
CBS	rs772450760	AA+	T	- -	●
CBS	rs773734233	CC+	T	- -	●
CBS	rs774926464	CC+	G	- -	●
CBS	rs775992753	GG+	A	- -	●
CBS	rs777919630	GG+	A	- -	●
CBS	rs778220779	AA+	G	- -	●
CBS	rs781444670	CC+	T	- -	●
CBS	rs781567152	AA+	G	- -	●
CBS	rs786204608	CC-	G	- -	●
CBS	rs786204609	GG-	C	- -	●
CBS	rs863223432	GG-	A	- -	●
CBS	rs863223433	GG-	A	- -	●
CBS	rs863223434	CC-	T	- -	●
CBS	rs863223435	GG-	A	- -	●
MTHFR	rs1476413	AA-	G,T	+ +	●
MTHFR	rs1801131	CC-	G	+ +	●
MTHFR	rs1801133	CC-	A	- -	●
MTHFR	rs4846051	AA+	A	- -	●
MTHFR	rs17367504	GG+	G	- -	●
MTHFR	rs17375901	CC+		- -	●
MTHFR	rs121434295	GG-	A	- -	●
MTHFR	rs121434296	CC-	T	- -	●
MTHFR	rs121434297	TT-	C	- -	●
MTHFR	rs138189536	GG+	A	- -	●
MTHFR	rs200137991	CC+	A	- -	●
MTHFR	rs543016186	CC+	T	- -	●

## Need for Nutrients



Name: Sample

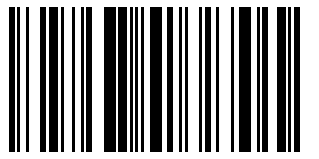
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:





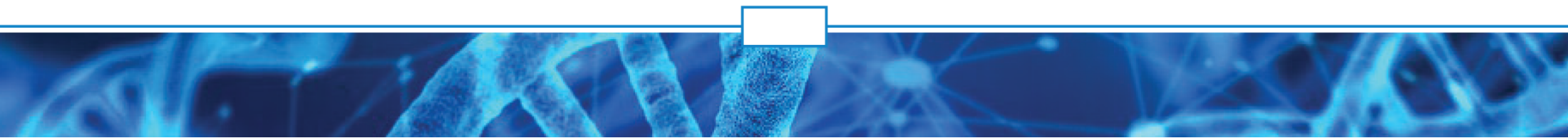
Sample

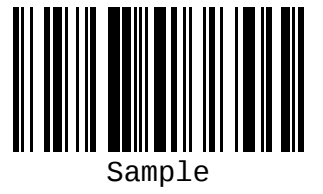
## Apigenin

 HIGH

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. One of these studies, carried out by researchers at the federal universities of Rio de Janeiro and Bahia, showed that the substance has positive effects on memory and learning, in addition to protecting and strengthening brain connections, called synapses. According to experts, the more intense the synapses formed by our neurons, the easier it is to memorize information and recall them later. In addition to the benefits already mentioned, apigenin was also effective against ultraviolet radiation and visible light (all the light we see with the naked eye, including that from artificial lamps, computers and screens on tablets and smartphones, for example). According to studies, the substance minimizes the impacts of damage caused by these radiations, protecting the skin's DNA and regulating the photoaging process. Results in red means beneficial.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GRIA3	rs687577	CC+	C		



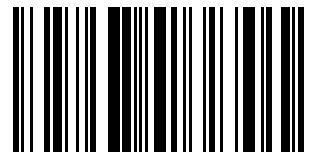


## Iodine

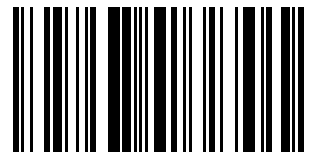
 MEDIUM

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	GG+	A,T		
ATM	rs1800056	TT+	C		
ATM	rs1800058	CC+	T		
ATM	rs1801673	AA+	T		
ATM	rs3092856	CT+	T		
ATM	rs3218695	CC+	A,T		
ATM	rs3218707	GG+	C		
ATM	rs4986761	TT+	C		
AURKA	rs1047972	GG-	T		
BRCA1	rs16942	AA-	A,C		
BRCA1	rs1799950	AA-	C		
BRCA1	rs1799966	AA-	A,C		
BRCA1	rs1800709	CC-	A		
BRCA1	rs2227945	AA-	C,G		
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		
CASC16	rs3803662	CC-	G		
CASC17	rs1859962	GT+	T		
CASC21	rs16902104	CC+	G,T		



CASC8	rs1447295	CC+	C,T	- -	●
CASC8	rs6983267	GG+	T	+ +	●
CASP8	rs1045485	GG+	A,C,T	- -	●
CDH1	rs16260	CC+	A	- -	●
CDKN1A	rs1801270	CC+	A,T	- -	●
CHEK2	rs17879961	TT-	C,G	- -	●
COMT	rs4680	AG+	A	+ -	●
COMT	rs165631	CC+	T	- -	●
CTLA4	rs231775	AA+	G	+ +	●
CYP3A4	rs2740574	AA-	T	- -	●
CYP3A4	rs55785340	AA+	G	- -	●
DAB2IP	rs1571801	CC-	T	- -	●
ELAC2	rs4792311	GG+	A,C	- -	●
FGF7	rs4338740	TT+	C	- -	●
FGFR2	rs1219648	AG+	G,T	+ -	●
FGFR2	rs2981582	CT-	G	+ -	●
FGFR4	rs351855	CC-	A	- -	●
FTO	rs17817449	GT+	A,G	+ -	●
GSTP1	rs1695	AA+	G	- -	●
HER2	rs1136201	AA+	G,T	- -	●
HMMR	rs299284	CC+	T	- -	●
IL-10	rs1800896	AG-	C	+ -	●
INTERGENIC	rs2056116	AG+	G	+ -	●
INTERGENIC	rs7965399	TT+	A,C	- -	●
INTERGENIC	rs10505483	GG-	T	- -	●
INTERGENIC	rs10816625	AA+	G	- -	●
INTERGENIC	rs10896449	AG+	G	+ -	●
INTERGENIC	rs13387042	AG+	G	+ -	●
INTERGENIC	rs16901979	CC+	A	- -	●
JAZF1	rs10486567	GG+	A	- -	●
KLF6	rs3750861	CC+	T	- -	●
MAP3K1	rs889312	CC+	A	- -	●
NCOA3	rs2230782	GG+	A,C	- -	●
NQO1	rs1800566	CT-	A	+ -	●
PDE8B	rs4704397	AA+	A	+ +	●



PHTF1	rs6679677	CC+	A	- -	●
PTCSC2	rs925489	TT+	C,T	- -	●
RNASEL	rs3738579	TT-	G	+ +	●
SH2B3	rs3184504	CC+	A,C,G	- -	●
SLCO1B3	rs4149117	GG+	C,G	- -	●
SLCO1B3	rs7311358	AA+	A	- -	●
SLCO1B3	rs11045585	AA+	G	- -	●
TCF2	rs4430796	GG+	G	- -	●
TCF7L2	rs12255372	GT+	T	+ -	●
TNF	rs361525	GG+	A	- -	●
TP53	rs1042522	CC-	C,T	- -	●
VAV3	rs4915077	TT+	C	- -	●
VTCN1	rs10754339	AA+	A	- -	●
WRN	rs1346044	TT+	C	- -	●
WRN	rs3087425	CC+	T	- -	●
XRCC1	rs25489	GG-	G,T	- -	●
ZNF827	rs13149290	CC+	T	- -	●

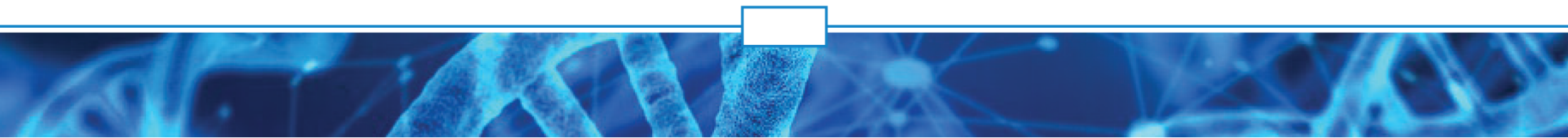
## Reaction to Glutamate

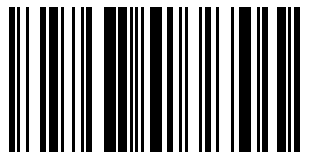


Indicates glutamate tolerance. If in orange or red, indicates lower tolerance to glutamate.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GAD1	rs701492	CC+	T	- -	●
GAD1	rs2241165	AG-	T	+ -	●

## Neurodegenerative diseases



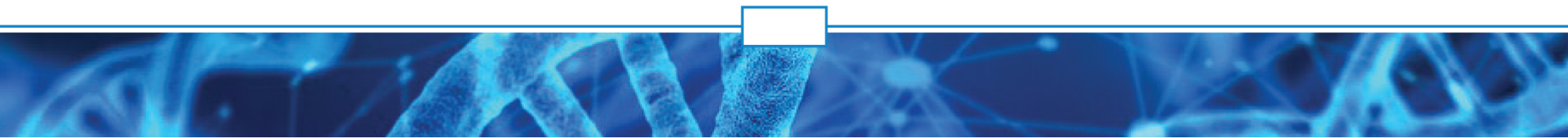


## Parkinson's disease



A central nervous system disorder that affects movement, often including tremors.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADH1C	rs283413	GG-	A,T	- -	●
BST1	rs4538475	AA+	G	- -	●
CTC1	rs3027247	TT-	C	- -	●
DLG2	rs17148090	AA+	C,G	- -	●
FAM47E	rs6812193	CC+	T	- -	●
GC	rs7041	GG-	G	- -	●
GSK3B	rs6438552	AG+	A	+ -	●
INTERGENIC	rs6532197	AA+	G	- -	●
INTERGENIC	rs10464059	GG+	A	- -	●
LRRK2	rs11564148	TT+	A	- -	●
LRRK2	rs34637584	GG+	A	- -	●
LRRK2	rs34778348	GG+	A	- -	●
MAOB	rs1799836	AA-	A,C	+ +	●
MAPT	rs393152	AA+	G	- -	●
MC1R	rs1805008	CC+	T	- -	●
MCCC1	rs10513789	TT+	G	- -	●
RAB25	rs34372695	CC+	G,T	- -	●
SNCA	rs356219	AA+	G	- -	●
SNCA	rs2736990	CC-	G	+ +	●
TF	rs1049296	CT+	T	+ -	●















































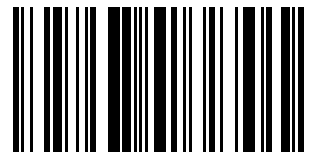


## Alzheimer's disease

 NORMAL

Progressive disease that destroys memory and other important mental functions. As we age, our brains change and we may occasionally have difficulty remembering details. However, Alzheimer's disease and other dementias cause memory loss and other symptoms significant enough to interfere with people's daily lives. These symptoms are not natural to aging. Not all memory loss is caused by Alzheimer's. In addition to memory loss, Alzheimer's symptoms include: Problems completing tasks that were once easy; Difficulties in solving problems; Changes in mood or personality; distancing from friends and family; Problems with communication, both written and spoken; Confusion about places, people and events; Visual changes such as problems understanding images.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
A2M	rs669	AA-	C		
ABCA7	rs3764650	GG+	G		
ABCA7	rs115550680	AA+	G		
APOC1	rs4420638	AA+	G		
APOE	rs7412	CC+	T		
APOE	rs405509	AC-	G		
APOE4	rs429358	TT+	C		
APP	rs63750066	GG-	T		
BDNF	rs6265	AG-	T		
BIN1	rs744373	TT-	G		
CD2AP	rs9349407	GG+	C		
CD2AP	rs10948363	AA+	G		
CETP	rs5882	AG+	A		
CHAT	rs2177369	CT-	G		
CHAT	rs3810950	AG+	A		
CLU	rs11136000	CC+	C		
CPS1	rs1047891	AC+	A		
CR1	rs3818361	CC-	G		
CR1	rs6656401	GG+	G,T		
CTSD	rs17571	CC-	A		
GCKR	rs1260326	CT+	C		
GOLM1	rs7019241	CC+	G,T		
GOLM1	rs10868366	GG+	T		
IL-1B	rs1143634	CC-	A		
IL-6	rs1800795	GG+	G		
LDLR	rs688	CC+	T		



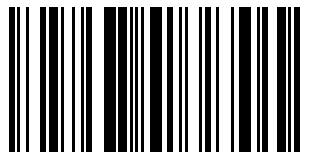
LRP6	rs2160525	GG+	G	- -	●
LTA	rs1799724	CT+	T	+ -	●
MS4A6A	rs610932	AC-	G	+ -	●
PCK1	rs8192708	AA+	G	- -	●
PICALM	rs3851179	GG-	C	- -	●
PICALM	rs10792832	GG+	G	- -	●
PLD3	rs145999145	GG+	A	- -	●
PPP1R3B	rs3748140	GG-	T	- -	●
PPP1R3B	rs9987289	GG+	G	- -	●
PRRC2C	rs2421847	AA+	G	- -	●
PSEN1	rs661	GG+	A,T	- -	●
PSEN1	rs63749824	CC+	G,T	- -	●
PSEN2	rs63750197	CC+	T	- -	●
TF	rs1049296	CT+	T	+ -	●
TFAM	rs1937	GG+	C	- -	●
TOMM40	rs2075650	AA+	G	- -	●
TREM2	rs75932628	CC+	A,T	- -	●

## Alzheimer's disease (early)

 NORMAL

Rare condition and only happens due to genetic and hereditary causes, it can appear after 35 years of age

Gene	RSID	Genotype	Minor Allele	Alteration	Result
APP	rs63750066	GG-	T	- -	●
PSEN1	rs661	GG+	A,T	- -	●
PSEN1	rs63750082	GG+	C,T	- -	●
PSEN1	rs63750687	CC+	G,T	- -	●
PSEN1	rs63750900	GG+	A	- -	●
PSEN2	rs28936379	AA+	C,G,T	- -	●
PSEN2	rs28936380	CC+	G,T	- -	●
PSEN2	rs63749851	AA+	C	- -	●
PSEN2	rs63749884	GG+	A	- -	●
PSEN2	rs63750215	AA+	T	- -	●
PSEN2	rs63750666	CC+	T	- -	●



## Huntington's Disease

● NORMAL

For a differential diagnosis of HD, all clinical conditions with symptomatic choreic picture are first examined. In practice, it is not difficult to differentiate HD conditions from those of many other Koreans. But it must be remembered that there are other diseases that, in addition to choreic manifestations, also have a hereditary or familial component, such as benign hereditary chorea, paroxysmal familial choreoathetosis, choreoacanthocytosis, dentate-red-pale-luysian atrophy, familial form of Alzheimer's disease, among others Still, it is possible to distinguish HD from these other diseases by different modes of inheritance, clinical course, prognosis, or findings in complementary exams. There are recent reports of a small number of individuals with a clinical picture similar to that of HD, but without expansion of the CAG trinucleotide (see Genetics in HD). These are called Huntington-like cases. On the other hand, the differential diagnosis of HD can offer some difficulty when it is confused with some non-hereditary disease, such as tardive dyskinesia. When it manifests itself in a predominantly psychiatric form, HD can be initially diagnosed as schizophrenia or depression. Involuntary first movements can be misinterpreted as a therapeutic complication. Such misconceptions, which are not uncommon, illustrate the importance of knowing a detailed family history. The diagnosis of HD may explain why the memory is not as good as it used to be, or why the person is feeling irritable or depressed. However, for many the news is very disturbing. It is common for people to be in a "state of denial" after being diagnosed with HD.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
PPARGC1A	rs8192678	GG-	T	- -	<span style="color: green;">●</span>

## Frontotemporal dementia

● UNDEFINED

DFT is the name given to the type of dementia in which degeneration of one or both of the frontal and temporal lobes of the brain occurs. The frontal lobes (left and right) regulate mood, behavior, judgment and self-control.

## Pick's Disease

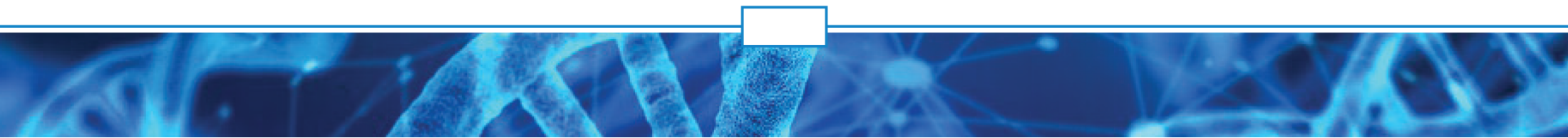
● UNDEFINED

Pick's disease or PiD is an unusual neurodegenerative disease caused by excess tau protein in neurons known as Pick bodies. It usually affects the frontal lobe or/and the temporal lobe impairing reasoning ability, language expression and self-control. It is similar to Alzheimer's disease, but in Pick's disease the behavioral symptoms appear long before memory loss starting around 40-60 years.

## Hereditary Sensory Neuropathy

● UNDEFINED

Neuropathy or neurological disorder/disorder is a general term referring to diseases or problems in the functioning of the nerves (pathologies). Nerves can be compromised by genetic problems, infections, toxins, drugs, physical injuries or even the body's own reactions.





## Mental health



Mental health is a term used to describe a level of cognitive or emotional quality of life or the absence of mental illness.

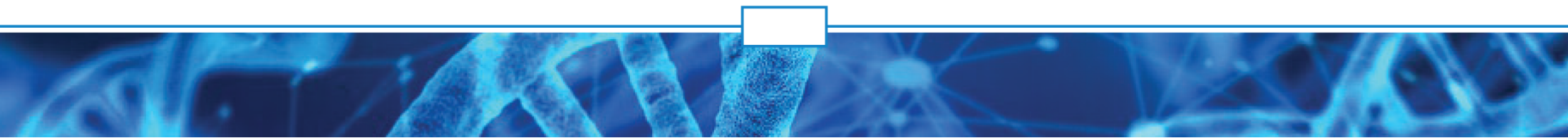
## Neurological

### BDNF



Brain-derived neurotrophic factor (BDNF) is an endogenous protein responsible for regulating neuronal survival and synaptic plasticity of the peripheral and central nervous system; BDNF has been studied in pathological situations including conditions such as depression and chronic pain; and has been cited in nociceptive sensory stimuli and pain hypersensitivity. BDNF acts on certain neurons in the central nervous system and the peripheral nervous system, helping to support the survival of existing neurons and stimulating the growth and differentiation of new neurons and synapses. In the brain, it is active in the hippocampus, cortex and basal forebrain - areas vital for learning, memory and higher thinking. BDNF is also expressed in retina, kidneys, prostate, motor neurons, and skeletal muscle, and is also found in saliva. BDNF itself is important for long-term memory. Although the vast majority of neurons in the mammalian brain are formed in the prenatal period, parts of the adult brain retain the ability to develop new neurons from neural stem cells in a process known as neurogenesis. Neurotrophins are proteins that help stimulate and control neurogenesis, with BDNF being one of the most active. BDNF is produced in the endoplasmic reticulum and secreted from dense core vesicles. Certain types of physical exercise have been shown to markedly (three-fold) increase BDNF synthesis in the human brain, a phenomenon that is partially responsible for exercise-induced neurogenesis and improvements in cognitive function. Niacin also appears to increase BDNF and tropomyosin kinase B (TrkB) receptor expression. BDNF has several known single nucleotide polymorphisms (SNP) including, but not limited to, rs6265, C270T, rs7103411, rs2030324, rs2203877, rs2049045 and rs7124442. rs6265 is the currently most investigated BDNF gene SNP (Val66Met). This point mutation in the coding sequence, a switch from guanine to adenine at position 196, results in an amino acid switch: valine to methionine switch at codon 66, Val66Met, which is in the pro-dominance of BDNF. Val66Met is exclusive to humans. The mutation interferes with the normal translation and intracellular trafficking of BDNF mRNA, as it destabilizes the mRNA and makes it subject to degradation. The Val66Met mutation results in a reduction in hippocampal tissue and has since been reported in a high number of individuals suffering from memory and learning disorders, anxiety disorders, depression, and neurodegenerative diseases such as Alzheimer's and Parkinson's. A meta-analysis indicates that the BDNF variant Val66Met is not associated with serum BDNF. Orange and red results indicate lower levels of BDNF.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T	<span style="color: red;">+</span> <span style="color: green;">-</span>	<span style="color: red;">●</span>







## Reduced Dopamine Binding Sites in Brain

 HIGH











A reduced number of dopamine binding sites in the brain typically indicates a decrease in the availability or density of dopamine receptors. Dopamine is a neurotransmitter involved in various functions, including movement, reward, motivation, and mood regulation. It plays a crucial role in the brain's reward system and is associated with feelings of pleasure and reinforcement. Dopamine receptors are proteins located on the surface of neurons (nerve cells) that bind to dopamine molecules, allowing them to transmit signals and affect neuronal activity. There are several types of dopamine receptors, including D1, D2, D3, D4, and D5 receptors, which are found in different regions of the brain. A reduction in the number of dopamine binding sites can occur due to various factors, including genetic predispositions, chronic drug use (such as in substance abuse), neurodegenerative disorders, or other neurological conditions. It can lead to altered dopamine signaling and affect the functioning of the brain circuits involved in dopamine-mediated processes. This reduction in dopamine binding sites can have significant implications for brain function and behavior. For example, it may be associated with a decreased ability to experience pleasure, reduced motivation, impaired movement control (as seen in Parkinson's disease), or altered reward processing. Conditions such as Parkinson's disease, schizophrenia, and substance use disorders are often associated with alterations in dopamine receptor availability. It's important to note that the impact of a reduced number of dopamine binding sites can vary depending on the specific region of the brain and the type of dopamine receptors affected. Additionally, the brain is a highly complex system, and dopamine is just one of many neurotransmitters involved in various functions.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		

## Sleep Quality

 NORMAL

Sleep quality can be related to the environment, clinical conditions and also the genetic tendency of each individual.

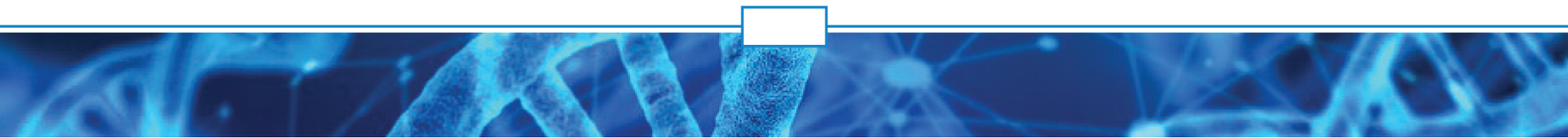
Gene	RSID	Genotype	Minor Allele	Alteration	Result
CACNA1C	rs2302729	CC+	C		
FGF12	rs9836672	CC+	T		
INTERGENIC	rs17071124	AA+	G		
MTNR1B	rs10830964	CC+	T		
TRPM6	rs11144134	TT+	C		

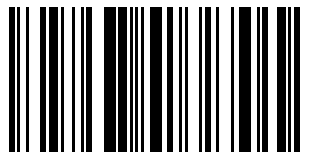
## Mental decline with age

 UNDEFINED

The brain begins to age much earlier than expected.

## Pains













## Fibromyalgia

 HIGH







Generalized muscle pain and weakness.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADRA1A	rs1048101	TT-	A		
ADRB2	rs1042713	GG+	A		
ADRB3	rs4994	CT-	G		
OPRM1	rs1799971	AG+	G		

## Pain Sensitivity

 MEDIUM-HIGH

























Pain sensitivity

Gene	RSID	Genotype	Minor Allele	Alteration	Result
COMT	rs4680	AG+	A		
COMT	rs4818	CC+	G,T		
OPRM1	rs1799971	AG+	G		

## Migraine

 MEDIUM

Headache of varying intensity, often accompanied by nausea and sensitivity to light and sound.



Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADRB2	rs1042713	GG+	A		
CDCA3	rs5443	CC+	T		
HCRTR2	rs2653349	GG+	G,T		
INTERGENIC	rs1835740	AG-	T		
LRP1	rs11172113	CT+	C		
NGFR	rs9908234	AA+	G		
NNMT	rs694539	GG-	T		
PGR	rs1042838	GG-	A,G		
PRDM16	rs2651899	GG-	A,C		
PTPRD	rs1975197	TT-	A		
PTPRD	rs4626664	GG+	A		
TGFB1	rs1800469	CT-	G		



## Headache

 NORMAL

Pain of varying intensity, localized or diffuse, in any part of the head.









Gene	RSID	Genotype	Minor Allele	Alteration	Result
HCRTR2	rs2653349	GG+	G,T		

## Personal characteristics

### Extraversion

 HIGH





Extraversion is marked by a pronounced involvement with the outside world. Extroverts enjoy being with people, are full of energy, and generally experience positive emotions. They tend to be enthusiastic, action-oriented, individuals who are likely to say "Yes!" or "Come on!" to opportunities for excitement. In groups, they like to talk, assert themselves, and draw attention to themselves. Introverts lack the exuberance, energy, and activity levels of extroverts. They tend to be calm, discreet, deliberate and disengaged from the social world. Your lack of social involvement should not be interpreted as shyness or depression; the introvert simply needs less stimulation than an extrovert and prefers to be alone. The introvert's independence and reserve are sometimes confused with hostility or arrogance. In reality, an introvert who scores high on the pleasantness dimension will not seek out others, but will be quite pleasant when approached.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CDH13	rs8056579	GG+			
CDH23	rs17635977	AA+			
PER3	rs228697	CG+	G		
ZNF285B	rs644148	GT+	T		

### Addiction to Heroin

 HIGH



Addiction to heroin, which is an opioid often used as a drug due to its euphoric effect. Results in orange and/or red indicate greater susceptibility to addiction.

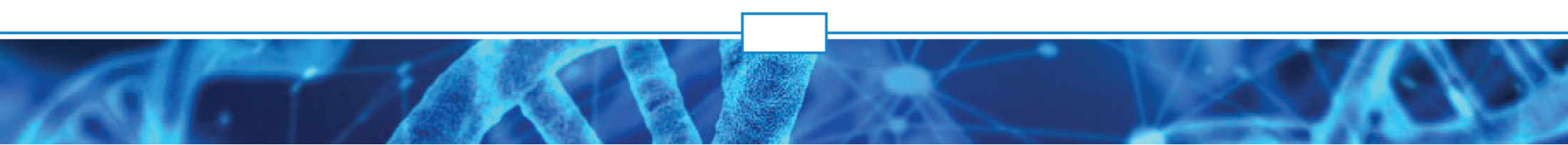
Gene	RSID	Genotype	Minor Allele	Alteration	Result
OPRM1	rs1799971	AG+	G		
TPH2	rs4290270	AA+	T		

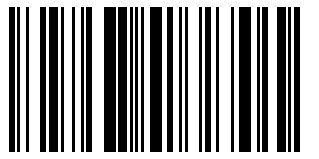
### Memory (long term, logic)

 MEDIUM-HIGH

It deals with the forms of thought in general (deduction, induction, hypothesis, inference) and the intellectual operations aimed at determining what is true or not.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
PRNP	rs1799990	AA+	G		







## Worst Verbal Communication in Autism

 MEDIUM-HIGH

















Autists express themselves in different ways from the point of view of speech, language and communication in social contexts. Some children may find it difficult to express what they are feeling because they cannot create and sequence speech sounds, as in the case of apraxia. However, they are able to understand everything others say and even communicate through writing or gestures. In these cases, speech disorders are not necessarily linked to autism, but they can be. Many children with ASD (Autism Spectrum Disorder) communicate normally but exhibit changes in prosody, for example, which are related to differences in speech rhythm, voice tone and intonation given to each word. Other autistic people are completely nonverbal. Red or orange results indicate worse verbal communication in the case of autism.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
XPO1	rs6735330	GG+	A		

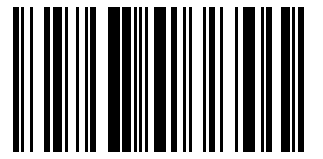
## Sociability

 MEDIUM-HIGH

Sociability is the characteristic that a person presents, that is, one who naturally tends to live better in society. Indicates how easy it is to make friends and keep them. Results in red indicate it is the more difficult to socialize.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CDH13	rs8056579	GG+			
CDH23	rs17635977	AA+			
CLOCK	rs1801260	TT-	G		
CLOCK	rs6832769	AA+	G		
OXTR	rs1042778	GG+	T		
OXTR	rs2254298	GG+	A		
OXTR	rs13316193	TT+	C		
PER3	rs228697	CG+	G		































## Alcoholism

 MEDIUM-HIGH



















A chronic disease characterized by uncontrollable alcohol consumption, conditioned by dependence.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADH1B	rs1229984	GG-	C,G		
ADH1C	rs698	AA-	C,T		
ALDH2	rs671	GG+	A		
ANKK1	rs1800497	CT-	A		
CNR1	rs806368	CT+	C		
FAAH	rs324420	CC+	A		
G6PD	rs1050828	GG-	T		
GHSR	rs2232165	CC-	A		
GHSR	rs2948694	AA+	G		
OPRM1	rs1799971	AG+	G		
OXTR	rs237899	AG+	A,C		
SLC6A3	rs27072	CT+	A,T		
SLC6A4	rs1042173	GT-	C		

## Self confidence

 MEDIUM

It is a person's conviction of being able to do or accomplish something.





Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHADL	rs9611519	CC+	T		
DBH	rs1611115	TT+	C		
FAM86B3P	rs2945232	CC+	C		
INTERGENIC	rs6047641	GG+	A,G		
INTERGENIC	rs10456089	GG+	A		
PTPRF	rs2039528	AG+	G		
SNAP25	rs362584	AG+	A		
TMEM16D	rs1849710	CC+	C		
XKR6	rs6981523	CC+	T		



## Night chronotype

 MEDIUM





Nocturnal or afternoon chronotype: the peak occurs much later, at 6 am. They are those people who do better at night, but need to prolong their rest until early morning. Sleep time is usually between 3:00 and 11:00. It corresponds to 25% of individuals. Result in orange or red indicates a tendency to have the night chronotype.

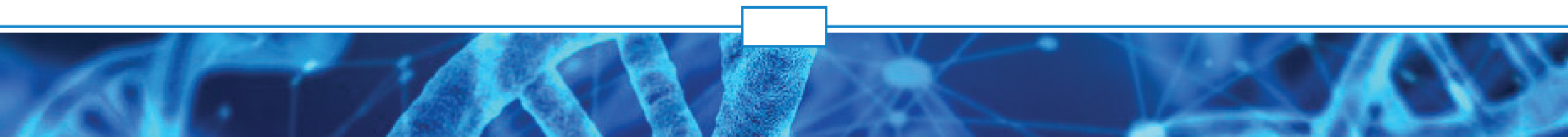
Gene	RSID	Genotype	Minor Allele	Alteration	Result
NR1D1	rs12941497	GG+	A		
PER3	rs228697	CG+	G		

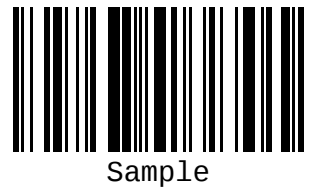
## Obsessive-Compulsive Disorder (OCD)

 MEDIUM

Excessive thoughts (obsessions) that lead to repetitive behaviors (compulsions).

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		
TPH2	rs4570625	GG+	G		



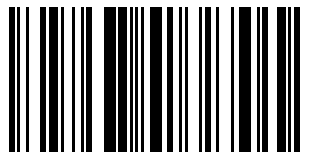


## Physical resistance



It is one of the fundamental skills in everyday life and is closely related to lifestyle habits. Related to time to reach fatigue.







Gene	RSID	Genotype	Minor Allele	Alteration	Result
ACE	rs4341	GG+	C	++	●
ACTN3	rs1815739	CT+	T	+ -	●
ADRB1	rs1801253	CC+	C	- -	●
ADRB2	rs1042713	GG+	A	- -	●
ADRB3	rs4994	CT-	G	+ -	●
AGTR2	rs35474657	CC-	A	- -	●
AGTR2	rs121917810	GG+	T	- -	●
APOE	rs11083750	CC+	A,G,T	- -	●
CDCA3	rs5443	CC+	T	- -	●
CLSTN2	rs17411949	CC+	T	- -	●
CRP	rs1205	CT+	T	+ -	●
GNB3	rs140263599	CC+	T	- -	●
HFE	rs1799945	CC+	G	- -	●
HFE	rs1800562	GG+	A	- -	●
HFE	rs1800730	AA+	T	- -	●
HIF1A	rs11549465	CC+	T	- -	●
HIF1A	rs11549467	GG+	A	- -	●
KCNJ11	rs5219	TT+	T	++	●
PPARA	rs1800206	CC+	G	- -	●
PPARA	rs4253778	GG+	C,T	++	●
PPARD	rs2267668	AA+	A,C	- -	●
SLC2A4	rs121434581	GG+	A,C	- -	●
SOD2	rs4880	CT-	G	+ -	●
SOD2	rs4516970	GG+	A	- -	●
SPOCK1	rs17170899	CC+	T	- -	●
TPK1	rs371271054	TT+	C	- -	●
UCP2	rs660339	CC-	T	++	●
VEGFA	rs3024994	CC+	T	- -	●
VEGFA	rs3025039	CC+	T	- -	●
VEGFR2	rs1870377	TT+	A	- -	●



## Cognitive Flexibility

 MEDIUM







Ability to better assimilate content.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CLSTN2	rs6439886	AG+	G		
CLSTN2	rs17348572	TT+	C		
WWC1	rs17070145	CT+	T		

## Memory

 MEDIUM






Faculty of preserving and remembering past states of consciousness and everything associated with them. Results in red indicates higher memory power.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CLSTN2	rs6439886	AG+	G		
CLSTN2	rs17348572	TT+	C		
WWC1	rs17070145	CT+	T		

## Hyperactivity

 MEDIUM



Chronic disease that includes attention deficit, hyperactivity and impulsivity.

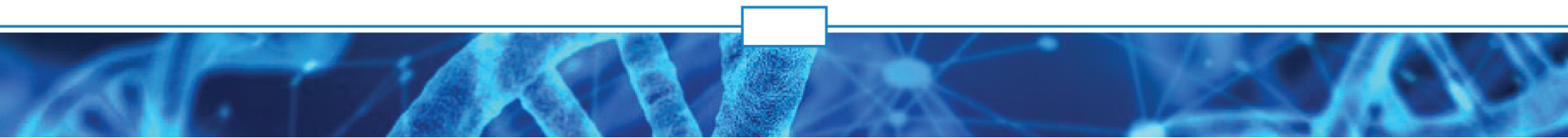
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ARVCF	rs165599	AA+	A		
COMT	rs4633	CT+	T		
COMT	rs4818	CC+	G,T		

## Attention Deficit Disorder with Food Colors

 MEDIUM

Attention deficit hyperactivity disorder (ADHD) still has no known cause. However, studies suggest that the increased consumption of processed foods, rich in food additives, alters child behavior.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HNMT	rs1050891	CT-	G		







## Hypothalamus Size (Smaller GG)

 NORMAL









The hypothalamus is the region of the brain (diencephalon), located over the thalamus, whose function is to maintain homeostasis, that is, the balance of internal bodily functions in adjustment to the environment, mainly through coordination between the nervous system and the endocrine system. The hypothalamus also produces two hormones, oxytocin (OCT) and antidiuretic hormone (ADH), which are transported to the neurohypophysis where they are stored, in addition to releasing factors that regulate the activity of the adenohypophysis. Some functions: controls the release of 8 main hormones by the pituitary gland, controls body temperature, controls the intake of food and liquids (hunger and thirst), controls behavior and sexual reproduction, controls daily cycles in physiological state and behavior, known like the circadian rhythm, it mediates emotional responses. Red or orange result (GG/AG alleles) indicates smaller hypothalamus size in men and normal in women. AA result (normal) indicates smaller size of the hypothalamus in women and larger size in men.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
OXTR	rs53576	AG+	A		

## Circadian Rhythm Impact

 NORMAL





The body may not be exact, but it is governed by a cycle called the circadian, an expression that means "about a day." This is because the organism organizes its functions so that they always occur in 24 hours or so, obeying the length of the day. This is the famous biological clock. Keeping a certain bedtime and waking time helps to regulate our internal schedule a little more. People with daytime habits sleep better than people with nighttime habits, which directly and favorably influences the amount of fat accumulated in the body, and during the night rest the body burns fat.

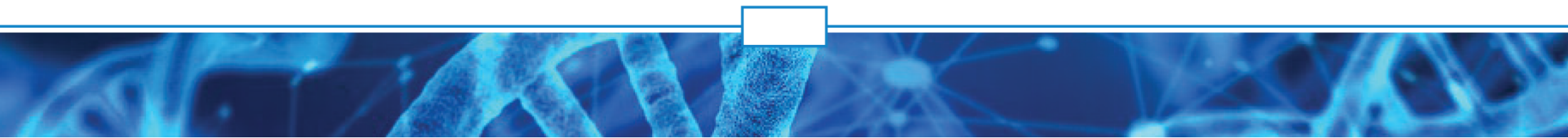
Gene	RSID	Genotype	Minor Allele	Alteration	Result
CLOCK	rs1801260	TT-	G		
CRY2	rs11605924	CC+	C		
PER2	rs121908635	AA-	C		
PER3	rs139315125	AA+	G		

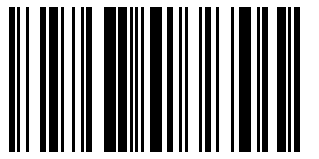
## Creativity

 NORMAL

According to research by the Department of Psychology at California State University, in the United States, our creativity is determined by genes. For Nancy Segal, co-author of the study and professor of psychology at the university, creativity is determined by genetic and environmental factors. Like most behaviors, it is affected by many different influences. Several studies seek to understand the creative process and identify points of influence. Although there is no definition of the creative profile, science has already identified the factors that are related to the enhancement of creative abilities. Among the main aspects are the genetics and life experiences of each person.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
KATNAL2	rs2576037	AG-			
NRG1	rs6994992	CT+	A,T		











## Visuospatial Working Memory

 NORMAL









The visuospatial storage area stores visual and spatial information. It can be used, for example, to construct and manipulate visual images and to represent mind maps. It is also beneficial for strategic organization and sports such as football and basketball.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CACNA1C	rs1006737	GG+	A		
NRG1	rs6994992	CT+	A,T		
SLC6A3	rs2617605	AA-	C		

## Musical Aptitude

 NORMAL



Genetic traits of aptitude for everything related to music, including musical instrument skills and singing.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
INTERGENIC	rs4291455	CC+	T		
INTERGENIC	rs7629705	GG+	A		
INTERGENIC	rs7635061	AA+	G		
LIMCH1	rs4349633	AG+	A		

## Increased Environmental Sensitivity

 NORMAL



Several studies in typically developing cohorts showed that the G allele of OXTR rs53576 was associated with increased environmental sensitivity, which led to more adverse outcomes under conditions of adversity or early childhood exclusion. Carriers of the G allele have also been shown to have a more beneficial response when receiving positive social support and are more likely to seek social support under stress.

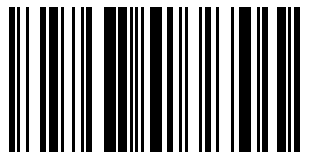
Gene	RSID	Genotype	Minor Allele	Alteration	Result
OXTR	rs53576	AG+	A		

## Ability to Accept Criticism

 NORMAL

Often the main reason for criticism to affect negatively is a problem of insecurity. Lack of self-esteem by itself would be a problem and not an effect of other issues. But genetics has a strong impact on this topic.



Gene	RSID	Genotype	Minor Allele	Alteration	Result
DBH	rs1611115	TT+	C		



## Cognitive empathy

 NORMAL



Cognitive Empathy means that you can understand how the other person sees the world. If when you communicate with a certain person you use different terms or specific words, it can be a sign that you are exercising your Cognitive Empathy. Orange or red result indicates greater cognitive empathy. Result in green or blue indicates minor.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
OXTR	rs2268491	CC+	T		

## Facial Expression (Less Friendliness)

 NORMAL



Oxytocin receptor polymorphism predicts amygdala reactivity and antisocial behavior.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
OXTR	rs1042778	GG+	T		

## Memory (traumatic)

 NORMAL



Memory that is stored after some trauma, whether physical or psychological.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
COMT	rs4680	AG+	A		

## Memory (verbal)

 NORMAL



Also known as short-term auditory memory, which we use, for example, when listening, speaking and writing.

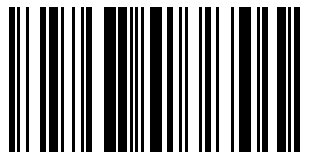
Gene	RSID	Genotype	Minor Allele	Alteration	Result
TNF	rs361525	GG+	A		

## Tendency to sleep late

 NORMAL

Persistent problems sleeping and staying asleep. Indication in red and orange indicate greater predisposition.



Gene	RSID	Genotype	Minor Allele	Alteration	Result
CLOCK	rs1801260	TT-	G		



## Morning Chronotype

 NORMAL





Morning Chronotype: Peak melatonin production occurs before midnight. These are individuals who need to go to bed early and are most active in the early hours of the day. In general, they sleep between 10 pm and 6 am. According to the International Melatonin Institute 25% of the population is morning. Result in orange or red indicates a greater tendency to the morning chronotype. Results in red could be beneficial

Gene	RSID	Genotype	Minor Allele	Alteration	Result
PER3	rs228697	CG+	G		

## Episodic memory

 LOW

It is the collection of past personal experiences that took place at a particular time and place. For example, if an individual remembers their 6th birthday party, this is an episodic memory. They allow an individual to figuratively travel back in time to remember the event that took place at a specific time and place.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HTR2A	rs6314	CC-	A		
WWC1	rs17070145	CT+	T		

## Marijuana addiction (Cannabis)

 UNDEFINED

Addiction to marijuana caused by its overuse.

## Devotion to work

 UNDEFINED

It is characteristic of people who are extremely dedicated to work, as well as self-disciplined and punctual. This profile also indicates dedicated students.

## Attention deficit

 UNDEFINED

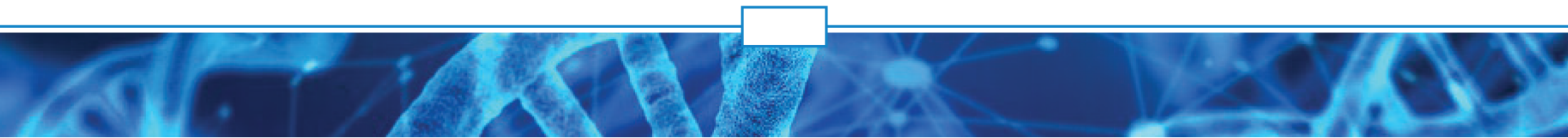
This designation refers to the presentation of the disorder where symptoms of hyperactivity and/or impulsivity are not present.

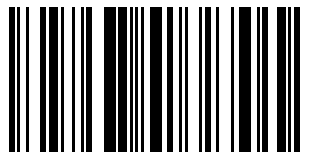
## Personality

 UNDEFINED

Personality is the set of psychological characteristics that determine the patterns of thinking, feeling and acting, that is, the personal and social individuality of someone

## Provocative













## Oppositional defiant disorder (ODD)

 MEDIUM





Oppositional Defiant Disorder is a condition responsible for behaviors that are completely restrictive in social settings. Children and adolescents included in this picture usually manifest moments of anger, insubordination, constant stubbornness, hostility, feelings of revenge and great difficulty in obeying rules when requested. Throughout childhood and adolescence, the person goes through very delicate moments in school, family and any collective space due to behavioral aspects. The presence of individuals with ODD at school level can lead to many occurrences within the institution, in addition to intense disruptions in the student-teacher relationship. In the family environment, this young person will cause disunity, a feeling of contempt for others, poor adaptation to advice and little commitment to activities of collective interest.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		
DBH	rs1108580	AA+	G		
DRD3	rs6280	CC+	T		
SLC6A3	rs27072	CT+	A,T		

## Challenging behavior

 NORMAL

Defiant Behavior (unrelated to Oppositional Defiant Disorder) is characterized by antisocial behaviors such as disobedience, defiant posture, and hostility. The individual has difficulties to follow rules and recognize his mistakes, resenting more than usual when he is contradicted.



Gene	RSID	Genotype	Minor Allele	Alteration	Result
CLOCK	rs1801260	TT-	G		
CLOCK	rs6832769	AA+	G		

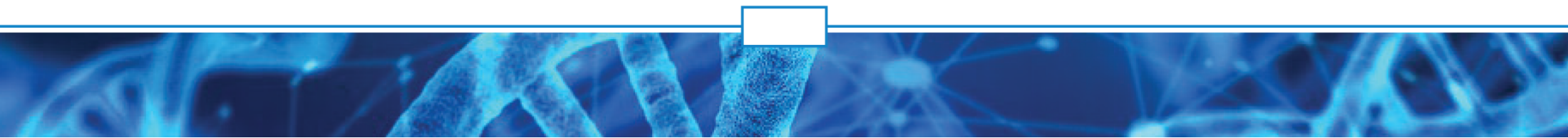
## Psychiatric

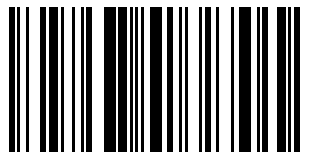
### Willingness to avoid mistakes

 HIGH

The TT and CT alleles indicate worse susceptibility to avoid errors. The CC allele indicates better susceptibility to avoid errors. Therefore, results in red and orange indicate less predisposition to avoid errors. Results in red is worse.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		











## Cocaine addiction

 HIGH



Cocaine is a fast addictive drug. The graph on the side indicates the genetic predisposition to have a greater chance of dependence.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHRNA5	rs16969968	GG+	A		
FAAH	rs324420	CC+	A		
OPRD1	rs12749204	GG+	G		

## Cognitive skills, attention and memory

 HIGH



Cognitive skills such as attention and memory.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T		

## Opioid Dependence

 HIGH







Opioids are drugs that act on the nervous system to relieve pain. Continued misuse can lead to physical addiction.

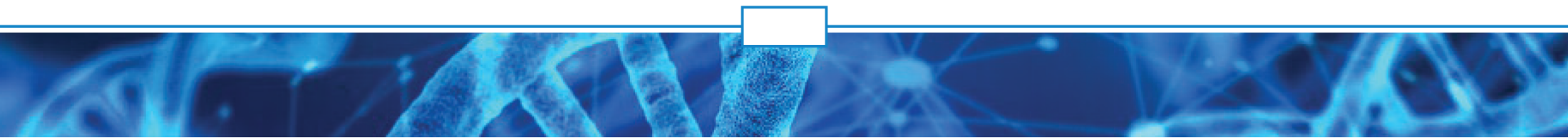
Gene	RSID	Genotype	Minor Allele	Alteration	Result
OPRM1	rs1799971	AG+	G		

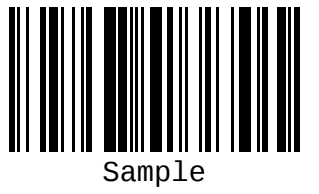
## Loneliness

 HIGH

Loneliness is a subjective matter: one person can feel alone in a crowd while another, at home and without anyone's company, feels very well accompanied. Logically, there are many factors that influence this perception, and most of them seem to be psychological in nature. According to research, the feeling of loneliness may be a genetically acquired factor. Result in orange or red indicates a greater tendency to the feeling of loneliness.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
OXTR	rs53576	AG+	A		
OXTR	rs2254298	GG+	A		
TCF4	rs613872	TT+	T		













## Type D Personality

 HIGH



Type D behavior pattern (or D personality) is associated with depression and anxiety, and they are more likely to develop coronary heart disease. Type D personality is characterized by maximum containment of negative emotions. People who have this personality type systematically inhibit their emotional expressiveness. They are also characterized by consequent social inhibition. In addition, they often have subjective feelings of tension, anxiety, anger and sadness. Social inhibition is the tendency to inhibit the expression of emotions in social interaction. In turn, negative affectivity is defined as a coping style that produces individual differences in psychological suffering, somatic complaints and the concept of oneself. This combination of negative affectivity and social inhibition can be found in people with a type D personality, which has a negative impact on health. For example, depression and social inhibition are shown to be factors that can increase mortality from an acute coronary event.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T		
FKBP5	rs1360780	CC+	A,C		
INTERGENIC	rs1545843	AG+	A		
SLC6A4	rs25532	CC-	A		

## Response to Fluoxetine (Anti-depressant)

 MEDIUM-HIGH







Daily Doses: The efficacy of fluoxetine hydrochloride for the treatment of patients with depression ( $\geq 18$  years) has been proven in 5-week and 6-week placebo-controlled clinical trials. fluoxetine hydrochloride has been shown to be significantly more effective than

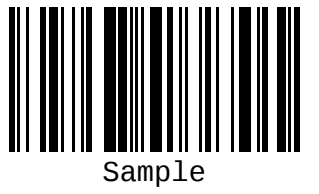
Gene	RSID	Genotype	Minor Allele	Alteration	Result
FKBP5	rs4713916	GG+	C,G,T		

## Dyslexia

 MEDIUM-HIGH

A learning disorder characterized by difficulty in reading.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
KIAA0319	rs761100	GG-	C		
KIAA0319	rs4504469	CC+	G,T		
TDP2	rs2143340	CT-	G,T		



## Sleep disorder



Changes in sleep patterns or habits that can negatively affect health.

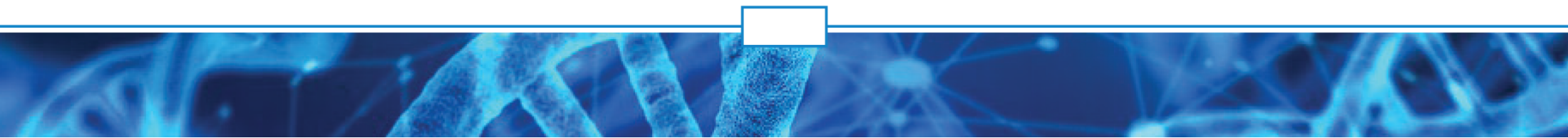
Gene	RSID	Genotype	Minor Allele	Alteration	Result
CLOCK	rs1801260	TT-	G	- -	●
FABP7	rs2279381	GG-	T	- -	●
HCRTR2	rs2653349	GG+	G,T	+ +	●
MAT1A	rs118204001	TT-	C	- -	●
PER3	rs10462020	TT+	G	- -	●
PER3	rs10462021	AA+	G	- -	●

## Autism (Asperger's Syndrome)



Asperger's Syndrome is a neurobiological disorder that falls under the category of pervasive developmental disorders. It was considered, for many years, to be a distinct condition, but close and closely related to autism. Asperger's Syndrome, like autism, has been incorporated into a new, all-encompassing medical term called Autism Spectrum Disorder (ASD). With this new definition, the syndrome came to be considered, therefore, a milder form of autism. Thus, patients are only diagnosed in degrees of impairment, thus the diagnosis is more complete.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
APC	rs465899	AG+	A	+ -	●
CBS	rs234706	GG+	A	- -	●
DRD3	rs167771	GG+	A,T	+ +	●
MTRR	rs1801394	AG+	G	+ -	●
OXTR	rs53576	AG+	A	+ -	●
OXTR	rs237885	TT+	G	- -	●
OXTR	rs2254298	GG+	A	- -	●
OXTR	rs2268491	CC+	T	- -	●
TCN2	rs1801198	GG+	A,C	+ +	●



Name: Sample

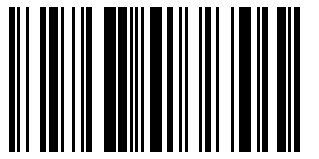
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:





Sample

## Psychosis with the use of marijuana

 MEDIUM-HIGH

There is consistent evidence showing a relationship over time between heavy or repeated use of marijuana and a first-time experience of psychosis. Heaviest marijuana users are about four times more likely to develop schizophrenia than non-users. Even the "average marijuana user" (for which the definition varies from study to study) is about twice as likely as a non-user to develop a psychotic disorder. In addition, these studies found a causal link between tetrahydrocannabinol (THC - the plant chemical that "causes the trip") and psychosis. That means the link is not a coincidence and one caused the other. People with certain genetic variants appear to be at greater risk. However, our understanding of these factors is still limited, and we cannot use genetic information alone to determine whether or not someone will develop psychosis from marijuana use.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
AKT1	rs2494732	CC+	C		

































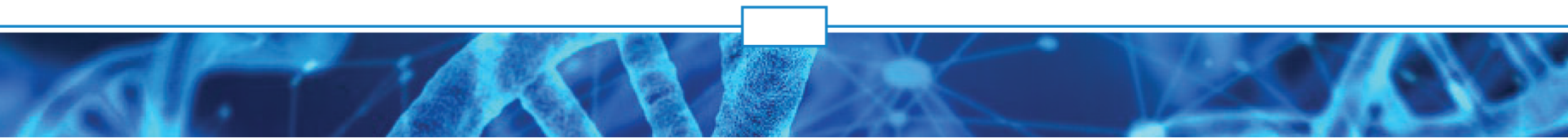


## Openness to New Experiences

 MEDIUM-HIGH

Openness to New Experience describes a dimension of cognitive style that distinguishes creative and imaginative people from conventional and practical people. Open people are intellectually curious, appreciate art and are sensitive to beauty. They tend to be, compared to closed people, more aware of their feelings. They tend to think and act in individualistic and nonconforming ways. Intellectuals usually score high on Openness to New Experience; consequently, this factor was also called culture or intellect. However, intellect is probably best considered as an aspect of openness to experience. Scores on openness to experience are only modestly related to years of schooling and scores on standard smart tests. Another characteristic of the open cognitive style is an ability to think of symbols and abstractions far removed from concrete experience. Depending on the individual's specific intellectual abilities, this symbolic cognition can take the form of mathematical, logical or geometric thinking, artistic and metaphorical use of language, composition or musical performance, or one of the many visual or performing arts. People with low scores on openness to experience tend to have narrow, common interests. They prefer the clear, direct and obvious over the complex, ambiguous and subtle. They may regard the arts and sciences with suspicion, regarding these endeavors as obscure or of no practical use. Closed people prefer familiarity to novelty; they are conservative and resistant to change. Openness is often presented as healthier or more mature by psychologists, who are often open to new experience. However, open and closed thinking styles are useful in different environments.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ASL	rs367543005	CC+			
ASPA	rs104894553	GG+			
CLOCK	rs6832769	AA+	G		
FUNDC1	rs6610953	GG+	A		
GJB2	rs72561723	GG-			
HTR1A	rs6295	CC-	G		
INTERGENIC	rs2540226	GG-	C		
INTERGENIC	rs9951150	AA+	A		
PSORS1C1	rs3130564	CC+	T		
PTPRD	rs2146180	AA+	G		
SERPINA1	rs28929474	GG-	T		
SERPINC1	rs121909548	GG-	A		
SGSH	rs104894637	CC-	G		
TCF4	rs1452787	AG+	A		
ZNF285B	rs644148	GT+	T		















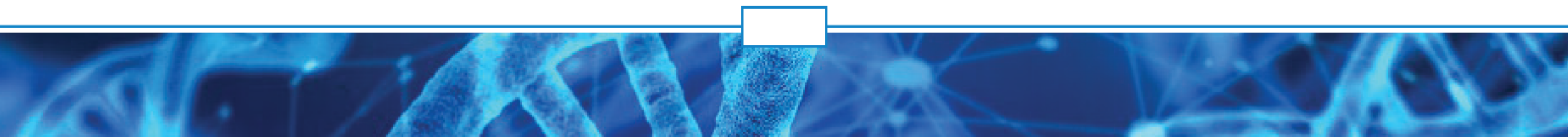


## Panic Syndrome

 MEDIUM-HIGH

Panic syndrome is a type of anxiety disorder in which unexpected bouts of despair and intense fear that something bad will happen occur, even if there is no reason for it or signs of impending danger.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADORA2A	rs5751876	TT+	C		
BDNF	rs6265	AG-	T		
GHRL	rs4684677	TT+	T		
HTR2A	rs6311	CT+	C		
HTR2A	rs6313	CT-	A		
HTR2A	rs3742278	AG+	G		































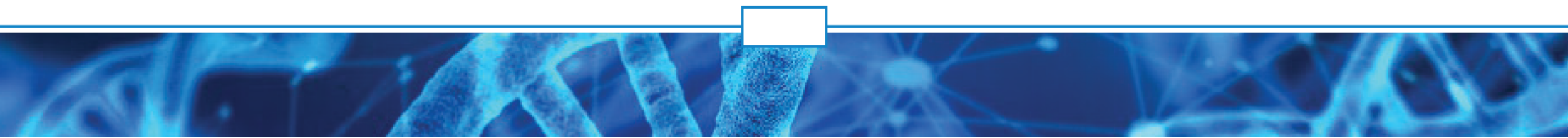


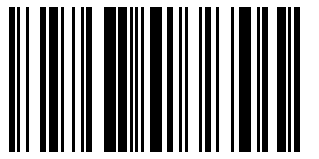
## Autism Spectrum Disorder (ASD)

 MEDIUM-HIGH

Autism spectrum disorders are neurodevelopmental disorders characterized by poor interaction and social communication, stereotyped and repetitive patterns of behavior, and irregular intellectual development, often with mental retardation. Symptoms begin early in childhood. In most children, the cause is unknown, although in some cases there is evidence of a genetic component or a medical cause. Diagnosis is based on developmental history and observation. Treatment consists of behavior control and sometimes drug treatment.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADRB2	rs1042714	GG+	C,T		
ANK3	rs10994336	CC+	T		
ANK3	rs10994397	CC+	T		
ANKRD11	rs199800166	CC+	T		
CACNA1C	rs1006737	GG+	A		
CACNA1C	rs1006737	GG+	A		
CD38	rs1800561	CC+	T		
DRD1	rs686	AA+	A,C,T		
DRD1	rs4532	TT+	T		
DRD1	rs265981	GG+	G,T		
INTERGENIC	rs4307059	TT+	T		
INTERGENIC	rs6990255	CC+	T		
INTERGENIC	rs10513025	TT+	C		
INTERGENIC	rs10513025	TT+	C		
ITIH3	rs17331151	CC+	T		
LOC107985969	rs17662626	AA+	G		
MACROD2	rs4141463	CC+	C		
MAOA	rs6323	GG+	T		
MAP2K1	rs727504317	GG+	A		
MEF2C	rs796052733	CC-	A		
MEFV	rs61752717	AA-	A,C		
MTR	rs1805087	AA+	G		
NR3C2	rs121912562	CC-	T		
NT5C2	rs11191580	TT+	C		
OXTR	rs237885	TT+	G		
OXTR	rs2254298	GG+	A		
OXTR	rs13316193	TT+	C		
RELN	rs736707	TT-	G		





SHANK2	rs150857128	AA+	G	- -	●
SHANK3	rs9616915	TT+	C	- -	●
TMLHE	rs781889971	GG+	G	+ +	●
TSC1	rs199620268	AA+	C	- -	●
WFS1	rs56393026	GG+	A	- -	●
XPO1	rs6735330	GG+	A	+ +	●
ZNF804A	rs1344706	GT-	C,T	+ -	●
ZNRD1	rs8321	TT-	C	- -	●

## Depression related to childhood abuse and trauma

● MEDIUM-HIGH

Mental disorder characterized by persistent depression or loss of interest in activities, significantly impairing daily life, and which may be linked to childhood maltreatment.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CRHR1	rs110402	TT-	A,C	+ +	●

## Borderline Personality Disorder

● MEDIUM

Borderline personality disorder is a severe disorder with high morbidity and mortality but unknown etiology.

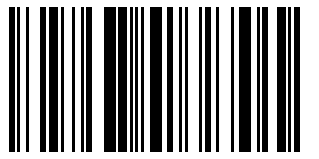
Gene	RSID	Genotype	Minor Allele	Alteration	Result
TPH1	rs1800532	AC-	T	+ -	●

## Alcohol addiction

● MEDIUM

Alcoholism is an individual's dependence on alcohol, considered a disease by the World Health Organization.









Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADH1B	rs1229984	GG-	C,G	+ +	●
ADH1C	rs698	AA-	C,T	- -	●
ALDH2	rs671	GG+	A	- -	●
CNR1	rs806368	CT+	C	+ -	●
SLC18A1	rs1390938	GG+	A	- -	●
TAS2R16	rs846664	TT-	C	- -	●



## Tourette's Syndrome

 MEDIUM



A disorder of the nervous system that involves repetitive movements or unwanted sounds.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BTBD9	rs9357271	CC+	C		
COL27A1	rs7868992	AA+	A		
INTERGENIC	rs9393366	GG+	A		
TPH2	rs4565946	TT+	A,G,T		

## Trend to Less Attention

 MEDIUM













Tendency to pay less attention, or be easily distracted.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
DTNBP1	rs2619522	GT-	C		

## Restless Legs Syndrome (Willis-Ekbom disease)

 MEDIUM

Restless legs syndrome is a sleep disorder in which a person feels an involuntary urge to move their legs. Usually the symptom occurs at night at bedtime, relief occurs with the movement of the legs, but often, moving the legs for hours to alleviate and with this it impairs sleep.











Gene	RSID	Genotype	Minor Allele	Alteration	Result
BTBD9	rs3923809	GG+	G		
BTBD9	rs9357271	CC+	C		
MAP2K5	rs1026732	AA+	A		
MAP2K5	rs4489954	TT+	A,G		
PTPRD	rs1975197	TT-	A		
PTPRD	rs4626664	GG+	A		



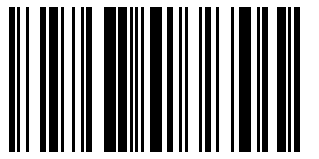
## Openness to new experiences (Feelings, Actions and Ideas)

 NORMAL

More positive people, more determined and susceptible to being open to new experiences. Usually they always widen the circle of alternatives and carry creativity and the search for solutions for a more complete life.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCA4	rs76157638	CC+	G,T		
FUNDC1	rs6610953	GG+	A		
MIR146A	rs2910164	CG+	G		
POLD1	rs397514632	GG+	A		
ZNF285B	rs644148	GT+	T		































































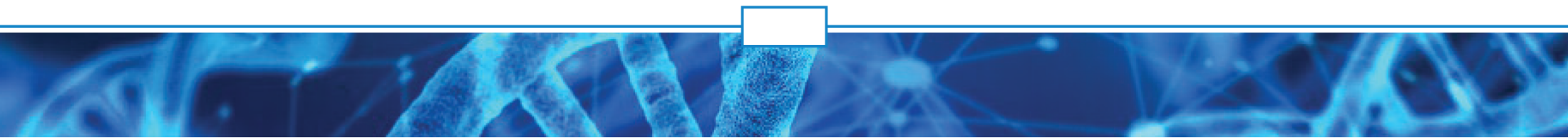


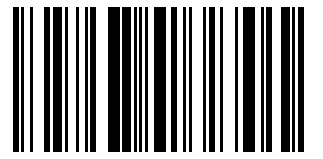
# Schizophrenia

 NORMAL

A disorder that affects a person's ability to think, feel and behave clearly.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ARVCF	rs165599	AA+	A		
CACNA1C	rs1006737	GG+	A		
CACNA1C	rs2159100	CC+	A,G,T		
CDCA3	rs5443	CC+	T		
CNTF	rs1800169	AG+	A		
COMT	rs6267	GG+	A,T		
COMT	rs13306278	CC+	T		
DAO	rs2070586	GG+	A		
DISC1	rs3737597	CC-	A		
DMD	rs104894787	CC-	A		
DMD	rs104894788	GG-	T		
DRD2	rs6277	CC-	A		
DRD3	rs167771	GG+	A,T		
DRD4	rs11246226	AC+	A		
HLA-DQA1	rs9273012	AA+	G		
HTR2A	rs6313	CT-	A		
HTR2A	rs6314	CC-	A		
HTR2A	rs659734	TT-	A		
HTR2A	rs1328674	GG-	C,G		
HTR2C	rs3813929	CC+	G,T		
IL-1B	rs16944	AG+	G		
MTHFR	rs1801131	CC-	G		
MTHFR	rs1801133	CC-	A		
NGF	rs6330	CC-	A		
NGF	rs11466112	CC-	A		
NLRC5	rs16965039	TT+	C		
NRG3	rs6584400	AG+			
PLCL1	rs7595412	AA+	A,T		
SLC6A3	rs464049	CC-	G		
TCF4	rs613872	TT+	T		
TCF4	rs9960767	AC+	C,G		





TSNARE1 rs17693963 AA+ C,G - - ●

## Addiction to Tobacco

● NORMAL

Addiction to tobacco, like cigarettes.

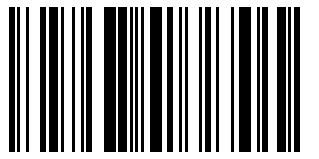
Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHRNA3	rs578776	CC-	A	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
CHRNA3	rs1051730	CC-	A	<span style="color: green;">- -</span>	<span style="color: blue;">●</span>
CHRNA4	rs1044396	CC-	A,C	<span style="color: red;">+ +</span>	<span style="color: orange;">●</span>
CHRNA5	rs16969968	GG+	A	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
DRD1	rs686	AA+	A,C,T	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
DRD2	rs4648317	CC-	A	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
GABBR2	rs3750344	AA-	C	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
HTR2A	rs6311	CT+	C	<span style="color: red;">+ -</span>	<span style="color: green;">●</span>

## Suicidal tendencies and thoughts

● NORMAL

Individuals who are more suicidal.











Gene	RSID	Genotype	Minor Allele	Alteration	Result
CREB1	rs4675690	CT+		<span style="color: red;">+ -</span>	<span style="color: green;">●</span>
DPP10	rs1375144	CT-	A	<span style="color: red;">+ -</span>	<span style="color: yellow;">●</span>
FKBP5	rs1360780	CC+	A,C	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
FKBP5	rs3800373	TT-	A	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
GRIA3	rs4825476	AA+	A,C	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
GRIK2	rs2518224	AA+	C	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
INTERGENIC	rs300774	GG-	C,T	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
MAOA	rs909525	GG-	T	<span style="color: green;">- -</span>	<span style="color: yellow;">●</span>
RARRES2	rs17173608	TT+	G	<span style="color: green;">- -</span>	<span style="color: green;">●</span>
TPH2	rs7305115	GG+	C,G,T	<span style="color: green;">- -</span>	<span style="color: green;">●</span>



## Nicotine Dependence

 NORMAL













Nicotine addiction - also called tobacco addiction - is an addiction to tobacco products caused by nicotine.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHRNA3	rs1051730	CC-	A		
CHRNA5	rs16969968	GG+	A		
CNR1	rs806368	CT+	C		
DRD2	rs4648317	CC-	A		
GABBR2	rs3750344	AA-	C		

## Intelligence - IQ

 NORMAL





Intelligence quotient is a value obtained through tests designed to assess an individual's cognitive abilities.

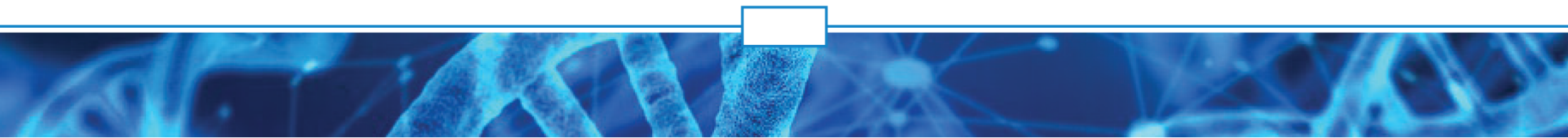
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADRB2	rs1042713	GG+	A		
ADRB2	rs1800888	CC+	T		
CHRM2	rs324650	TT+	A		
GFAP	rs2289681	CC+	T		
HMGA2	rs10784502	TT+	T		
KL	rs9536314	TT+	A,G		

## Bipolar Disorder (Response to Lithium Treatment)

 NORMAL

Efficient or not effective response to the disorder associated with mood changes when treated with lithium.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GADL1	rs17026688	CC+	T		
NTRK2	rs1387923	GG+	G		































## Epilepsy

 NORMAL





A disease in which the activity of nerve cells in the brain is disrupted, causing seizures.

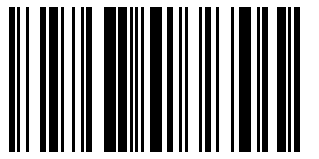
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ABCC2	rs717620	GG-	T		
ABCC2	rs2273697	GG+	A		
ABCC2	rs56199535	CC+	A,G,T		
ABCC2	rs56220353	CC+	G,T		
ABCC2	rs56296335	GG+	A,C,T		
BAG3	rs2234962	TT+	C		
CACNB4	rs1805031	GG-	A		
CPA6	rs114402678	GG+	A		
EFHC1	rs3804505	CC-	A,T		
GOSR2	rs387906881	GG+	T		
KCNQ3	rs118192254	AA-	C		
PRICKLE2	rs139747674	CC+	T		
SCN1A	rs796053099	CC-	A		

## Type A Personality

 NORMAL

The Type A Personality appears to be an action/emotion complex characterized by an ongoing, chronic, and incessant struggle in an attempt to achieve more in less time, harboring a constant, covert hostility. The sense of urgency in time and overt or covert hostility give rise to annoyance, irritation, resentment, and impatience, feelings that can be considered the central points of the Type A Personality. Some behavioral characteristics in the Type A personality: 1. Tendency to try to reach goals that are not well defined or that are too high; 2. Strong drive to compete; 3. Continuous desire to be recognized and to progress; 4. Involvement in multiple roles; 5. Practical impossibility (lack of time) to finish some projects; 6. Physical and mental concern; 7. Inability to relax satisfactorily, even during spare times; 8. Chronic dissatisfaction with achievements; 9. Degree of ambition is always above what you get; 10. Rapid body movements; 11. Facial tension; 12. Emotive and explosive intonation in normal conversation; 13. Hands and teeth almost always clenched.







Gene	RSID	Genotype	Minor Allele	Alteration	Result
COMT	rs4680	AG+	A		
MAOA	rs6323	GG+	T		



## Seasonal Affective Disorder (SAD)

 NORMAL

























Major Depressive Disorder with a Seasonal Pattern (formerly known as seasonal affective disorder, or SAD) is characterized by recurrent episodes of depression in late fall and winter, alternating with periods of normal mood the rest of the year.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CRY2	rs1554338	AA+	G		
OPN4	rs1079610	CT+	C,T		
OPN4	rs2675703	CC+	T		

## ADHD (Attention Deficit Hyperactivity Disorder)

 NORMAL



Chronic disease that includes attention deficit, hyperactivity and impulsivity.

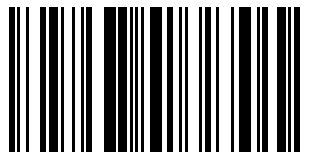
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		
BDNF	rs6265	AG-	T		
BDNF	rs11030104	AG+	G		
CLOCK	rs1801260	TT-	G		
DBH	rs1611115	TT+	C		
DRD4	rs1800955	CC+	C,G		
HTR2A	rs6314	CC-	A		
HTR2A	rs7984966	TT+	A,C		
MTHFR	rs1801131	CC-	G		
SLC6A2	rs3785143	CC+	T		
SLC6A3	rs27048	CT+	A,G,T		
SLC6A3	rs27072	CT+	A,T		

## Aggressiveness in children with ADHD

 NORMAL

Aggressive behavior in children who have Attention Deficit Hyperactivity Disorder.





Gene	RSID	Genotype	Minor Allele	Alteration	Result
NTM	rs35974940	GG+	T		



## Anorexia Nervosa

 NORMAL



Eating disorder that causes the individual to have a distorted view of their body, leading to an obsession with losing weight.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FAAH	rs324420	CC+	A		
PPP3CA	rs2659546	GG-	T		

## Cataplexy and Narcolepsy (sleep)

 NORMAL



A chronic sleep disorder that causes excessive daytime sleepiness.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
EIF3G	rs2305795	GG+	A,C		

## Depression in Children with Autism

 NORMAL



CC children of rs6311 had significantly more severe symptoms of depression than those with C/T or T/T genotypes.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HTR2A	rs6311	CT+	C		

## Late dyskinesia

 NORMAL





A condition that affects the nervous system and manifests itself through involuntary movements, also known as tics. It is often caused by long-term use of some psychiatric medications.

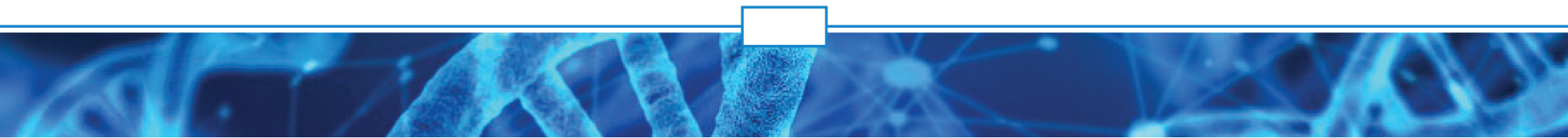
Gene	RSID	Genotype	Minor Allele	Alteration	Result
ANKK1	rs1800497	CT-	A		

## Suicidal Thoughts Using Citalopram

 NORMAL

Citalopram can aggravate anxiety and cause suicidal thoughts.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
GRIA3	rs4825476	AA+	A,C		
GRIK2	rs2518224	AA+	C		





## Suicidal thoughts in teenagers with depression

● NORMAL

Suicidal thinking is very common in teenagers with depression.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
FKBP5	rs1360780	CC+	A,C	- -	<span style="color: green;">●</span>

## Circadian Rhythm (nocturnal preference)

● NORMAL

Period of approximately 24 hours on which the biological cycle of almost all living beings is based, being mainly influenced by the variation of light, temperature, tides and winds between day and night.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CLOCK	rs1801260	TT-	G	- -	<span style="color: green;">●</span>

## Aggressiveness with the use of Cannabis

● UNDEFINED

Violent behavior is a major public health problem, annually resulting in approximately 1.43 million deaths worldwide. Genetic factors explain 50-63% of the variation in aggressive behavior and several genetic variants that influence aggressive behavior have been identified. Aggressive behavior is influenced by a combination of genetic and environmental factors, including substance use. A high proportion of all crimes are committed under the influence of substances of abuse and therefore assault while intoxicated is an important subtype of all aggressive behavior. Cannabis, one of the most widely used drugs worldwide, has been linked to increased impulsiveness and decreased behavioral inhibition. The relationship between marijuana use and aggression has been established; marijuana use is associated with a 7-fold increased risk of subsequent violent and aggressive behavior.

## Insanity

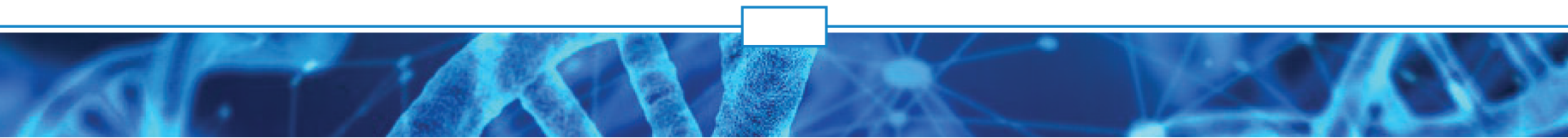
● UNDEFINED

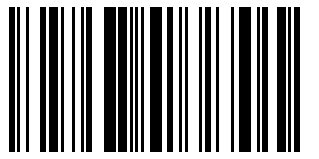
It is a condition in which brain function is lost. It is a set of symptoms that directly affect a person's quality of life, leading to cognitive, memory, reasoning problems, and also affecting language, behavior and altering quality of life.

## Disinhibition

● UNDEFINED

People with this characteristic tend to be more communicative, have greater confidence in expressing themselves, more resourcefulness, resourcefulness, fearlessness, are more expansive and sociable.





## Anger Manifestation

UNDEFINED

The time it takes for rabies to manifest after contamination varies depending on the nature of the virus, the amount transmitted and the place where the virus has penetrated. If the contagion point was the head or neck, the virus reaches more quickly.

## Memory Reduction caused by anxiety

UNDEFINED

Anxiety and chronic stress can affect areas of the brain that influence long-term and short-term memory and chemical production, which can result in emotional imbalance. People with the disorder still have difficulty falling asleep, which leads to a significant reduction in concentration.

## Brunner's Syndrome (Impulsive Aggression)

UNDEFINED

This syndrome is rare and is characterized by a drastic change in the individual's character, so that they become more aggressive, as well as intellectual disability.

## Neurotoxic effect of Zinc associated with ApoE (ε4 isoform)

UNDEFINED

For carriers of the T allele of rs73924411 of the SLC30A3 gene, there may be a type of neurotoxicity induced by a high serum zinc concentration.

## Reasons for Conflict

### Stress

HIGH

A state generated by the perception of stimuli that cause emotional excitement and, by disturbing homeostasis, lead the body to trigger an adaptation process characterized by an increase in adrenaline secretion, with several systemic consequences. Result in orange or red indicates greater sensitivity to stress.









Gene	RSID	Genotype	Minor Allele	Alteration	Result
DRD2	rs6277	CC-	A	- -	<input type="radio"/>
FKBP5	rs1360780	CC+	A,C	+ +	<input checked="" type="radio"/>
OXTR	rs2254298	GG+	A	- -	<input type="radio"/>



## Emotional Insensitivity

 HIGH























Having emotional insensitivity means not being able to empathize, that is, to capture and assimilate the different feelings of other people. Orange or red result indicates greater susceptibility to emotional insensitivity.

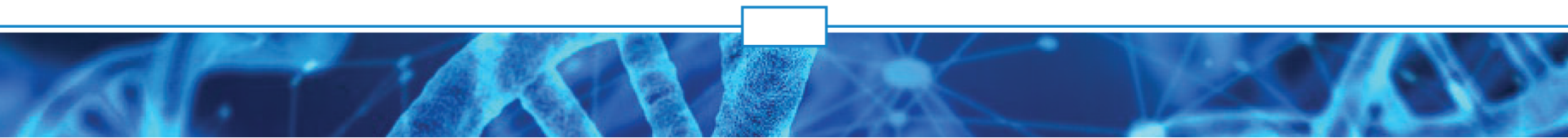
Gene	RSID	Genotype	Minor Allele	Alteration	Result
COMT	rs4680	AG+	A		
OXTR	rs53576	AG+	A		
OXTR	rs1042778	GG+	T		
OXTR	rs13316193	TT+	C		

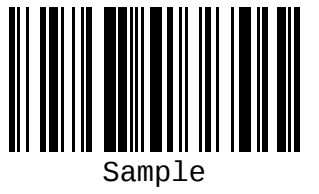
## Difficulties in Dealing with Criticism

 MEDIUM-HIGH

Being sensitive to criticism is a common trait for many people and requires skills. Some people use criticism in a positive way to improve or in a negative way that can lower their self-esteem and cause stress, anger or even aggression.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
CHADL	rs9611519	CC+	T		
CLOCK	rs1801260	TT-	G		
CLOCK	rs6832769	AA+	G		
DBH	rs1611115	TT+	C		
FAM86B3P	rs2945232	CC+	C		
INTERGENIC	rs6047641	GG+	A,G		
INTERGENIC	rs10456089	GG+	A		
PTPRF	rs2039528	AG+	G		
SNAP25	rs362584	AG+	A		
TMEM16D	rs1849710	CC+	C		
XKR6	rs6981523	CC+	T		





## Relationship Selectivity



Some people are more selective about the people they interact with. Be it in the work environment, in friendships, in love life. They are more judicious and selective in their choices, making them less prone to disappointment. Some very selective people may also have difficulty in relationships.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
BDNF	rs6265	AG-	T	<span style="color:red">+</span> <span style="color:green">-</span>	<span style="color:yellow">●</span>
DBH	rs1611115	TT+	C	<span style="color:red">+</span> <span style="color:red">+</span>	<span style="color:red">●</span>
SNAP25	rs362584	AG+	A	<span style="color:red">+</span> <span style="color:green">-</span>	<span style="color:yellow">●</span>
TPH1	rs1800532	AC-	T	<span style="color:red">+</span> <span style="color:green">-</span>	<span style="color:yellow">●</span>

## Addictions



Addiction is a repetitive habit that degenerates or causes some harm to the addict and those who live with him.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
MAOA	rs909525	GG-	T	<span style="color:red">+</span> <span style="color:red">+</span>	<span style="color:orange">●</span>

## Greater Tendency to Lie



Despite the considerable role of heredity in explaining individual differences in deceptive behavior, few studies have investigated which specific genes contribute to the heterogeneity of deceitful behavior among individuals. Furthermore, little is known about which specific neurotransmitter pathways underlie the deception. To address these two key questions, a neurogenetic deception strategy was implemented through an encouraged task in a laboratory setting. The tryptophan hydroxylase 2 (TPH2) gene, which encodes the rate-limiting enzyme in brain serotonin biosynthesis, contributes to individual differences in deceptive behavior.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
TPH2	rs4570625	GG+	G	<span style="color:green">-</span> <span style="color:green">-</span>	<span style="color:yellow">●</span>

## Skeletal system (bones)

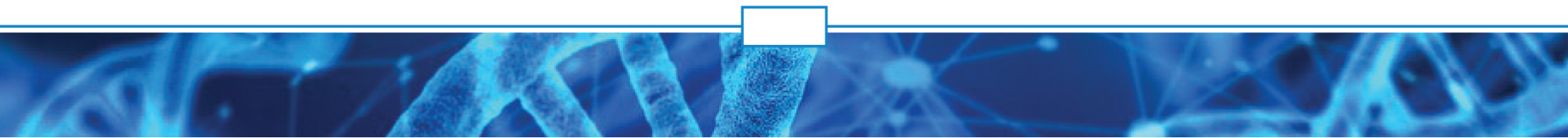
### Development Defects



It is the occurrence of intrauterine developmental delay or failure.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
MTHFD1	rs2236225	CT-	A	<span style="color:red">+</span> <span style="color:green">-</span>	<span style="color:yellow">●</span>

## Sleep







## Chronic Fatigue Syndrome (CFS)

 HIGH











Chronic Fatigue Syndrome (CFS) is a clinically diagnosed condition whose main symptom is the presence of intense fatigue (tiredness) that may worsen with physical or mental activity, but does not improve with rest. That is, the patient feels persistently tired without an apparent cause, regardless of the amount of rest they take. Although in most cases the cause is unknown, organic (infections) or psychological stressors can trigger the onset of symptoms. Treatment should be directed towards better symptom control and many patients can recover from CFS over time. The main symptom is fatigue. Other important symptoms are: difficulty with memory or concentration, sore throat, presence of painful lymph nodes in the neck or armpits, muscle and joint pain, headache and unrefreshing sleep. The term syndrome refers to a set of signs or symptoms, so many others may be present, such as: abdominal pain, chest pain, chronic cough, diarrhea, dizziness, dry mouth, nausea, irritability, depression, anxiety disorders, tingling, dry eye, plus weight loss or gain.

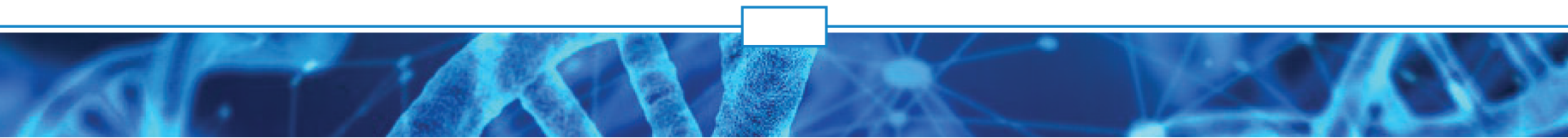
Gene	RSID	Genotype	Minor Allele	Alteration	Result
IL-10	rs1800871	CC-	G		

## Caffeine Anxiety and Insomnia

 HIGH

Too much caffeine can have very uncomfortable side effects such as nervousness, tremors, headache, insomnia, mental agitation, rapid heartbeat, cold sweat and a feeling of anguish when all this happens.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADA	rs73598374	GG-	A,G,T		
ADORA2A	rs2236624	TT+	T		
ADORA2A	rs2298383	CC+	C		
ADORA2A	rs3761422	TT+	C		
ADORA2A	rs5751876	TT+	C		





## Insomnia with Caffeine

 MEDIUM

Caffeine is a substance considered to be psychostimulant. This means that it has properties that stimulate brain activity, increasing alertness and leading to a heightened state of agitation, depending on the dose of coffee ingested.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADORA2A	rs2236624	TT+	T		
ADORA2A	rs2298383	CC+	C		
ADORA2A	rs5751876	TT+	C		
INTERGENIC	rs7628219	CC+	T		
INTERGENIC	rs11706236	AA+	G		
INTERGENIC	rs16905439	CC+	T		
KAZN	rs2103117	AG+	A		
MTNR1B	rs10830964	CC+	T		
NEDD4L	rs158856	CC+			
PRIMA1	rs6575353	AA+	G		

## Sports

### Dance

 MEDIUM-HIGH

People who dance easily

Gene	RSID	Genotype	Minor Allele	Alteration	Result
HTR2A	rs6313	CT-	A		

## Weight

### 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	AG+	G		

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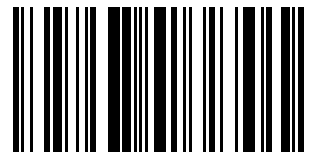
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Health Insurance:



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## Weight Management

 MEDIUM

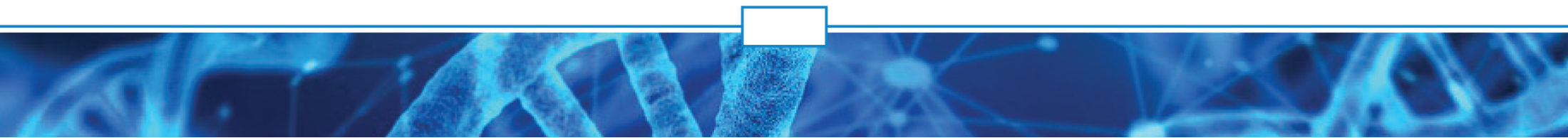
It is about the care that is taken to be at the proper weight, for example, the difficulty in losing weight. Larger values on the right indicate greater difficulty in maintaining a healthy body weight.

Gene	RSID	Genotype	Minor Allele	Alteration	Result
ADRB2	rs1042713	GG+	A		
FABP2	rs1799883	GG-	A,C,G		

## Weight gain with exercise

 UNDEFINED

Easier to gain muscle mass with exercises.





## Bibliography

### 17Q24.3:

**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.

**AANAT:** Li J, You X, Bian C, Yu H, Coon SL, Shi Q. Molecular Evolution of Aralkylamine N-Acetyltransferase in Fish: A Genomic Survey. Li J, ed. *International Journal of Molecular Sciences*. 2016;17(1):51. doi:10.3390/ijms17010051.

**AATK:** Tanja Haag, Christina E. Herkt, Sara K. Walesch, Antje M. Richter, Reinhard H. Dammann *Genes Cancer*. 2014 Sep; 5(9-10): 365–374. doi: 10.18632/genesandcancer.28 **PMCID:** PMC4209602 Cécile Jacovetti, Veronica Jimenez, Eduard Ayuso, Ross Laybutt, Marie-Line Peyot, Marc Prentki, Fatima Bosch, Romano Regazzi *Mol Endocrinol*. 2015 May; 29(5): 693–702. Published online 2015 Mar 9. doi: 10.1210/me.2014-1299 **PMCID:** PMC5414744 Aron 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.bbaliip.2013.10.019.

**ABCA4:** Zhang N, Tsybovsky Y, Kolesnikov AV, et al. Protein misfolding and the pathogenesis of ABCA4-associated retinal degenerations. *Human Molecular Genetics*. 2015;24(11):3220-3237. doi:10.1093/hmg/ddv073.

**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.

**ABCB11:** Zhang Y, Li F, Wang Y, et al. Maternal bile acid transporter deficiency promotes neonatal demise. *Nature Communications*. 2015;6:8186. doi:10.1038/ncomms9186.

**ABCC2:** Tian J, Xu Y-Y, Li L, Hao Q. MiR-490-3p sensitizes ovarian cancer cells to cisplatin by directly targeting ABCC2. *American Journal of Translational Research*. 2017;9(3):1127-1138.

**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.

**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.

**ABO:** Lee EC, Kim SH, Park S-J. Outcomes after liver transplantation in accordance with ABO compatibility: A systematic review and meta-analysis. *World Journal of Gastroenterology*. 2017;23(35):6516-6533. doi:10.3748/wjg.v23.i35.6516.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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

**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.

**ACOXL:** Wood CD, Veenstra H, Khasnis S, et al. MYC activation and BCL2L1 silencing by a tumour virus through the large-scale reconfiguration of enhancer-promoter hubs. Proudfoot NJ, ed. eLife. 2016;5:e18270. doi:10.7554/eLife.18270.

**ACTN3:** Pickering C, Kiely J. ACTN3, Morbidity, and Healthy Aging. Frontiers in Genetics. 2018;9:15. doi:10.3389/fgene.2018.00015.

**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

**ADAMTSL3:** Shin Yup Lee, Jin Eun Choi, Hyo-Sung Jeon, Yi-Young Choi, Won Kee Lee, Eung Bae Lee, Hyun Cheol Lee, Hyo-Gyoung Kang, Seung Soo Yoo, Jaehee Lee, Seung Ick Cha, Chang Ho Kim, Myung Hoon Lee, Young Tae Kim, Sanghoon Jheon, Jae Yong Park PLoS One. 2015; 10(10): e0140216. Published online 2015 Oct 13. doi: 10.1371/journal.pone.0140216 PMID: PMC4603900 Hao Wang, Jiamao Luo, Chun Liu, Huilin Niu, Jing Wang, Qi Liu, Zhongming Zhao, Hua Xu, Yanqing Ding, Jingchun Sun, Qingling Zhang

**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 Rubolini Ecol Evol. 2016 May; 6(10): 3226–3239. Published online 2016 Apr 7. doi: 10.1002/ece3.2053 PMID: PMC4870208 Andrea Contina, Eli S. Bridge, Jeremy D. Ross, J. Ryan Shipley, Jeffrey F. Kelly PLoS One. 2018; 13(1): e0190859. Published online 2018 Jan 11. doi: 10.1371/journal.pone.0190859 PMID: PMC5764313

**ADGRE3:**

**ADH1B:** Gharpure KM, Lara OD, Wen Y, et al. ADH1B promotes mesothelial clearance and ovarian cancer infiltration. Oncotarget. 2018;9(38):25115-25126. doi:10.18632/oncotarget.25344.

**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.

**ADH4:** Cluster headache is associated with the alcohol dehydrogenase 4 (ADH4) gene. (PMID: 19925625) Rainero I. Pinessi L Headache 2010 3 23 43 56 Association of genetic variants in alcohol dehydrogenase 4 with alcohol dependence in Brazilian patients. (PMID: 15863808) Guindalini C. Zatz M The American journal of psychiatry 2005 3 23 43 56 Alcohol dehydrogenase alleles in Parkinson's disease. (PMID: 11009184) Buervenich S. Olson L Movement disorders : official journal of the Movement Disorder S



Name: Sample

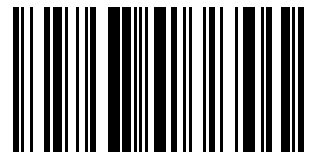
Age:

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Sample

**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

**ADRA1A:** Genetic variation in the autonomic nervous system affects mortality: a study of 1,095 trauma patients. (PMID: 19476811) Morris JA ... Canter JA Journal of the American College of Surgeons 2009 3 23 41 Association of alpha1A adrenergic receptor gene variants on chromosome 8p21 with human stage 2 hypertension. (PMID: 16685204) Gu D ... Qiang B Journal of hypertension 2006 2 3 41 Polymorphisms in the alpha1A-adrenoceptor gene do not modify the short- and long-term efficacy of alpha1-adrenoceptor antagonists in the treatment of benign prostatic hyperplasia. (PMID: 16536786) Mochtar CA ... Kiemeney LA BJU international 2006 3 23 41 Polymorphisms in the promoter region of the alpha1A-adrenoceptor gene are associated with schizophrenia/schizoaffective disorder in a Spanish isolate population. (PMID: 16043131) Clark DA ... Kerwin RW Biological psychiatry 2005 3 23 41 The thiazide-sensitive Na(+)-Cl(-) cotransporter gene, C1784T, and adrenergic receptor-beta3 gene, T727C, may be gene polymorphisms susceptible to the antihypertensive effect of thiazide diuretics. (PMID: 15824464) Matayoshi T ... Kawano Y Hypertension research : official journal of the Japanese Society of Hypertension 2004

**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

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**AFF2:** FRAXE-associated mental retardation protein (FMR2) is an RNA-binding protein with high affinity for G-quartet RNA forming structure. (PMID: 19136466) Bensaid M ... Bardoni B Nucleic acids research 2009 3 4 23 Expansion mutation frequency and CCG/GCC repeat polymorphism in FMR1 and FMR2 genes in an Indian population. (PMID: 11119302) Sharma D ... Thelma BK Genetic epidemiology 2001

**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,

**AGTR2:** Yap RWK, Shidoji Y, Yap WS, Masaki M. Association and Interaction Effect of AGTR1 and AGTR2 Gene Polymorphisms with Dietary Pattern on Metabolic Risk Factors of Cardiovascular Disease in Malaysian Adults. Nutrients. 2017;9(8):853. doi:10.3390/nu9080853.

**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. Ferland J Biol Chem. 2013 May 10; 288(19): 13676–13694. Published online 2013 Mar 26. doi: 10.1074/jbc.M112.420786 PMCID: PMC3650405 Gilly Wolf, Tzuri Lifschytz, Hagar Ben-Ari, Pavel Tatarsky, Tirzah Kreisel Merzel, Amit Lotan, Bernard Lerer Transl Psychiatry. 2018; 8: 124. Published online 2018 Jul 2. doi: 10.1038/s41398-018-0171-1 PMCID: PMC6028478

**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

**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.

**ALLC:** Christina B. Cooley, Lisa M. Ryno, Lars Plate, Gareth J. Morgan, John D. Hulleman, Jeffery W. Kelly, R. Luke Wiseman Proc Natl Acad Sci U S A. 2014 Sep 9; 111(36): 13046–13051. Published online 2014 Aug 25. doi: 10.1073/pnas.1406050111 PMCID: PMC4246986 Gareth J Morgan, Jeffery W Kelly J 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

**AMPD1:** Zha T, Wu H. Expression of serum AMPD1 in thyroid carcinoma and its clinical significance. Experimental and Therapeutic Medicine. 2018;15(4):3357-3361. doi:10.3892/etm.2018.5859.

**ANK3:** Garza JC, Qi X, Gjeluci K, et al. Disruption of the psychiatric risk gene Ankyrin 3 enhances microtubule dynamics through GSK3/CRMP2 signaling. Translational Psychiatry. 2018;8:135. doi:10.1038/s41398-018-0182-y.

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

Name: Sample

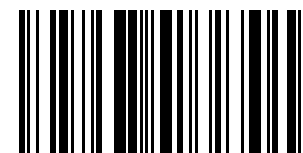
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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.

**ANKRD11:** Characterization of ANKRD11 mutations in humans and mice related to KBG syndrome. (PMID: 25413698) Walz K ... Tekin M *Human genetics* 2015 3 4 71 Mutations in ANKRD11 cause KBG syndrome, characterized by intellectual disability, skeletal malformations, and macrodontia. (PMID: 21782149) Sirmaci A ... Tekin M *American journal of human genetics* 2011 3 4 71 ANKRD11 variants cause variable clinical features associated with KBG syndrome and Coffin-Siris-like syndrome. (PMID: 28250421) Miyatake S ... Matsumoto N *Journal of human genetics* 2017 3 71 Clinical and molecular findings in 39 patients with KBG syndrome caused by deletion or mutation of ANKRD11. (PMID: 27605097) Goldenberg A ... Philip N *American journal of medical genetics. Part A* 2016 3 71 Broadening of cohesinopathies: exome sequencing identifies mutations in ANKRD11 in two patients with Cornelia de Lange-overlapping phenotype. (PMID: 25652421) Parenti I ... Kaiser FJ *Clinical genetics* 2016

#### ANKS1B:

**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.

**APC:** Cappell SD, Mark KG, Garbett D, Pack LR, Rape M, Meyer T. Emi1 switches from being a substrate to an inhibitor of APC/CCdh1 to start the cell cycle. *Nature.* 2018;558(7709):313-317. doi:10.1038/s41586-018-0199-7.

**APH1B:** Biundo F, Ishiwari K, Del Prete D, D'Adamio L. Deletion of the  $\gamma$ -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. Smith *Lipid Res.* 2015 Mar; 56(3): 653-664. doi: 10.1194/jlr.M056754 PMID: PMC4340312 Ying 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 Chen *Nucleic Acids Res.* 2016 Jul 27; 44(13): 6423-6433. Published online 2016 Apr 29. doi: 10.1093/nar/gkw341 PMID: PMC5291254 Yupeng Zhang, Jing He, Jing Zhao, Min Xu, Danwen Lou, Patrick Tso, Zongfang Li, Xiaoming Li *Biochem 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.

**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

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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 Andrade<sup>1\*</sup>, 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

**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

Name: Sample

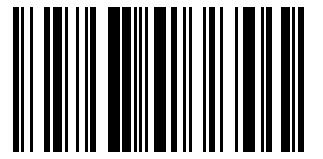
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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

**APPL2:** Yeo JC, Wall AA, Luo L, Stow JL. Rab31 and APPL2 enhance Fc $\gamma$ R-mediated phagocytosis through PI3K/Akt signaling in macrophages. Mostov KE, ed. Molecular Biology of the Cell. 2015;26(5):952-965. doi:10.1091/mbc.E14-10-1457.

**ARHGAP11A:** Bin Dai, Xuan Zhang, Runze Shang, Jianlin Wang, Xisheng Yang, Hong Zhang, Qi Liu, Desheng Wang, Lin Wang, Kefeng Dou Cell Commun Signal. 2018; 16: 99. Published online 2018 Dec 13. doi: 10.1186/s12964-018-0312-4 PMID: 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 Fan Oncotarget. 2016 Aug 9; 7(32): 51829–51839. Published online 2016 Jul 2. doi: 10.18632/oncotarget.10386 PMID: PMC5239517 Lei Wang, Saie Shen, Mingsong Wang, Fangbao Ding, Haibo Xiao, Guoqing Li, Fengqing Hu Med Sci Monit. 2019; 25: 21–31. Published online 2019 Jan 1. doi: 10.12659/MSM.911503 PMID: PMC6327779 Xianping Dai, Feng Geng, Jiale Dai, Mengshun Li, Ming Liu Med Sci Monit. 2018; 24: 8669–8677. Published online 2018 Nov 30. doi: 10.12659/MSM.

**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

**ARNTL:** Oishi Y, Hayashi S, Isagawa T, et al. Bmal1 regulates inflammatory responses in macrophages by modulating enhancer RNA transcription. Scientific Reports. 2017;7:7086. doi:10.1038/s41598-017-07100-3.

**ARRB2:** Wang H, Deng Q-W, Peng A-N, et al.  $\beta$ -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

Name: Sample

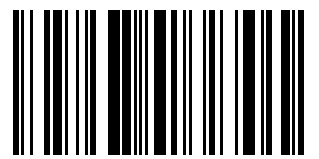
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Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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 E . Salviati L The Journal of biological chemistry 2009 3 4 23 58

**ASPA:** Structure of aspartoacylase, the brain enzyme impaired in Canavan disease. (PMID: 17194761) Bitto E . Phillips GN Proceedings of the National Academy of Sciences of the United States of America 2007 3 4 23 26 58 Cloning of the human aspartoacylase cDNA and a common missense mutation in Canavan disease. (PMID: 8252036) Kaul R . Matalon R Nature genetics 1993 2 3 4 23 58 Examination of the mechanism of human brain aspartoacylase through the binding of an intermediate analogue. (PMID: 18293939)

**ASPM:** Jayaraman D, Kodani A, Gonzalez DM, et al. Microcephaly proteins Wdr62 and Aspm define a mother centriole complex regulating centriole biogenesis, apical complex and cell fate. Neuron. 2016;92(4):813-828. doi:10.1016/j.neuron.2016.09.056.

**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.

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

**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 neurochirurgia 2009 3 4 23 58

**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, Mokkonen 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:10.1073/pnas.1619441114

**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 Mammalian Gene Collection (MGC) project

**BACE1:** GGA1 regulates signal-dependent sorting of BACE1 to recycling endosomes, which moderates A $\beta$  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  $\beta$ -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

Name: Sample

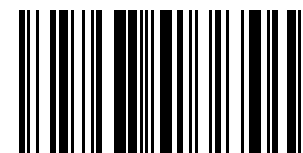
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Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**BAG3:** Ilker Kudret Sariyer, Nana Merabova, Prem Kumer Patel, Tijana Knezevic, Alessandra Rosati, Maria C. Turco, Kamel KhaliliPLoS 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. LavoiePLoS Genet. 2015 Oct; 11(10): e1005582. Published online 2015 Oct 23 10.1371/journal.pgen.1005582PMCID: PMC4619

**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.

**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.

**BCL11B:** Marion Dubuissez, Ingrid Loison, Sonia Paget, Han Vorng, Saliha Ait-Yahia, Olivier Rohr, Anne Tsicopoulos, Dominique LeprinceMol Cell Biol. 2016 Jul 1; 36(13): 1881–1898. Prepublished online 2016 May 9. Published online 2016 Jun 15. doi: 10.1128/MCB.00062-16PMCID: PMC4911745Ling-juan Zhang, Walter K. Vogel, Xiao Liu, Acharawan Topark-Ngarm, Brian L. Arbogast, Claudia S. Maier, Theresa M. Filtz, Mark LeidJ Biol Chem. 2012 Aug 3; 287(32): 26971–26988. Published online 2012 Jun 14. doi: 10.107

**BCO1:** Gong X, Marisiddaiah R, Rubin LP. Inhibition of pulmonary  $\gamma$ -carotene 15, 15'-oxygenase expression by glucocorticoid involves PPAR $\gamma$ . 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 Ca<sup>2+</sup> 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

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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.00341-15 PMID: 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

**BMPR1B:** Katja Stange, Julie Désir, Naseebullah Kakar, Thomas D. Mueller, Birgit S. Budde, Christopher T. Gordon, Denise Horn, Petra Seemann, Guntram Borck *Orphanet J Rare Dis.* 2015; 10: 84. Published online 2015 Jun 24. doi: 10.1186/s13023-015-0299-5 PMID: 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 Tsai *PLoS One.* 2013.

**BPIFC:** Haaland ØA, Jugessur A, Gjerdevik M, et al. Genome-wide analysis of parent-of-origin interaction effects with environmental exposure (PoOxE): An application to European and Asian cleft palate trios. DeWan AT, ed. *PLoS ONE.* 2017;12(9):e0184358. doi:10.1371

**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 Mehdipour *Biomed Res Int.* 2013; 2013: 928562. Published online 2013 Nov 7. doi: 10.1155/2013/928562 PMID: 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.

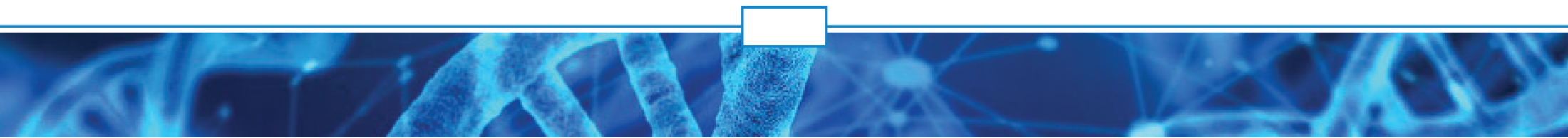
**BST1:** Crystallographic studies on human BST-1/CD157 with ADP-ribosyl cyclase and NAD glycohydrolase activities. (PMID: 11866528) Yamamoto-Katayama S ... Morikawa K *Journal of molecular biology* 2002 3 4 23 BST-1, a surface molecule of bone marrow stromal cell lines that facilitates pre-B-cell growth. (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.

**C10ORF11:** Grønskov K, Dooley CM, Østergaard E, et al. Mutations in C10orf11, a Melanocyte-Differentiation Gene, Cause Autosomal-Recessive Albinism. *American Journal of Human Genetics.* 2013;92(3):415-421. doi:10.1016/j.ajhg.2013.01.006.

**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.

**C2ORF82:**



Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**C4ORF33:** Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T . Sugano S Nature genetics 2004 3 4 56 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 2 3 56 A Genome-Wide CRISPR Screen Identifies Genes Critical for Resistance to FLT3 Inhibitor AC220. (PM

**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 Engle Clin Case Rep. 2013 Oct; 1(1): 30–37. Published online 2013 Sep 30. doi: 10.1002/ccr3.11 PMID: 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

**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.

**CACNA1C:** Kisko TM, Braun MD, Michels S, et al. Cacna1c haploinsufficiency leads to pro-social 50-kHz ultrasonic communication deficits in rats. Disease Models & Mechanisms. 2018;11(6):dmm034116. doi:10.1242/dmm.034116.

**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.

**CACNB4:** Abir Tadmouri, Shigeki Kiyonaka, Maud Barbado, Matthieu Rousset, Katell Fablet, Seishiro Sawamura, Eloi Bahembera, Karin Pernet-Gallay, Christophe Arnoult, Takafumi Miki, Karin Sadoul, Sylvie Gory-Faure, Caroline Lambrecht, Florian Lesage, Satoshi Akiyama, Saadi Khochbin, Sylvain Baulande, Veerle Janssens, Annie Andrieux, Ricardo Dolmetsch, Michel Ronjat, Yasuo Mori, Michel De Waard EMBO J. 2012 Sep 12; 31(18): 3730–3744. Published online 2012 Aug 14. doi: 10.1038/emboj.2012.226 PMID: PMC3

**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 PMID: 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.

**CALHM1:** Vingtdeux 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.

**CALN1:** Kazuhiro Kobuke, Kenji Oki, Celso E. Gomez-Sanchez, Elise P. Gomez-Sanchez, Haruya Ohno, Kiyotaka Itcho, Yoko Yoshii, Masayasu Yoneda, Noboru Hattori Hypertension. Author manuscript; available in PMC 2019 Jan 1. Published in final edited form as: Hypertension. 2018 Jan; 71(1): 125–133. Published online 2017 Nov 6. doi: 10.1161/HYPERTENSIONAHA.117.10205 PMID: PMC5730498 Olivia Engmann, Benoit Labonte, Amanda Mitchell, Pavel Bashtrykov, Erin S. Calipari, Chaggai Rosenbluh, Yong-Hwee E. Loh

**CAMK1D:** Wang L, Lin Y, Meng H, et al. Long non-coding RNA LOC283070 mediates the transition of LNCaP cells into androgen-independent cells possibly via CAMK1D. American Journal of Translational Research. 2016;8(12):5219-5234.

**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

**CAMTA1:** Mollet IG, Malm HA, Wendt A, Orho-Melander M, Eliasson L. Integrator of Stress Responses Calmodulin Binding Transcription Activator 1 (Camta1) Regulates miR-212/miR-132 Expression and Insulin Secretion. The Journal of Biological Chemistry. 2016;291(35):18

Name: Sample

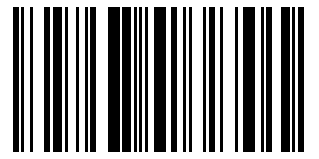
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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 Deregulation of CRAD-controlled cytoskeleton initiates mucinous colorectal cancer via  $\beta$ -catenin. (PMID: 30361697) Jung YS . Park JI Nature cell biology 2018 3 4 58 A recurrent de novo mutation in ACTG1 causes isolated

**CARMIL1:** Distinct roles for CARMIL isoforms in cell migration. (PMID: 19846667) Liang Y . Cooper JA Molecular biology of the cell 2009 2 3 4 56 Cell Migration and Invadopodia Formation Require a Membrane-binding Domain of CARMIL2. (PMID: 26578515) Lanier MH . Cooper JA The Journal of biological chemistry 2016 3 4 56 Mammalian CARMIL inhibits actin filament capping by capping protein. (PMID: 16054028) Yang C . Zigmond SH Developmental cell 2005 3 4 56 The Functional Proximal Proteome of Oncogenic Ras

**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.

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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

**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.

Name: Sample

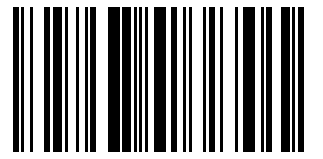
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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

**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.

**CD274 (PD-L1):** Engagement of the PD-1 immunoinhibitory receptor by a novel B7 family member leads to negative regulation of lymphocyte activation. (PMID: 11015443) Freeman GJ ... Honjo T The Journal of experimental medicine 2000 2 3 4 23 54 Programmed death ligand 1 (PD-L1) gene variants contribute to autoimmune Addison's disease and Graves' disease susceptibility. (PMID: 19850680) Mitchell AL ... Pearce SH The Journal of clinical endocrinology and metabolism 2009 3 23 41 54 Association of an A/C single nucleotide polymorphism in programmed cell death-ligand 1 gene with Graves' disease in Japanese patients. (PMID: 18322304) Hayashi M ... Komiya I European journal of endocrinology 2008 3 23 41 54 Identification of a novel splice variant of human PD-L1 mRNA encoding an isoform-lacking Igv-like domain. (PMID: 15780196) He XH ... Liu Y Acta pharmacologica Sinica 2005 3 4 23 54 B7-H1, a third member of the B7 family, co-stimulates T-cell proliferation and interleukin-10 secretion. (PMID: 10581077) Dong H ... Chen L Nature medicine 1999

**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

**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

**CD44:** Jokela T, Oikari S, Takabe P, et al. Interleukin-1 $\beta$ -induced Reduction of CD44 Ser-325 Phosphorylation in Human Epidermal Keratinocytes Promotes CD44 Homomeric Complexes, Binding to Ezrin, and Extended, Monocyte-adhesive Hyaluronan Coats. The Journal of Bi

**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

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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 CDH1 mutation carriers. Journal of Medical Genetics. 2015;52(6):361-374. doi:10.1136/jmedgenet-2015-103094.

**CDH13:** Abigail C. Killen, Melissa Barber, Joshua J. W. Paulin, Barbara Ranscht, John G. Parnavelas, William D. Andrews Brain Struct Funct. 2017; 222(8): 3567–3585. Published online 2017 Apr 6. doi: 10.1007/s00429-017-1418-y PMID: PMC5676827 Andrea 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 Lesch Front Cell Neurosci. 2

**CDH23:** Characterization of Usher syndrome type I gene mutations in an Usher syndrome patient population. (PMID: 15660226) Ouyang XM . Liu XZ Human genetics 2005 3 4 23 45 58 Usher syndrome 1D and nonsyndromic autosomal recessive deafness DFNB12 are caused by allelic mutations of the novel cadherin-like gene CDH23. (PMID: 11090341) Bork JM . Morell RJ American journal of human genetics 2001 2 3 4 23 58 Genome-wide association scan for five major dimensions of personality. (PMID: 18957941) Terraccia

**CDHR3:** Kelly Watters, Ann C. Palmenberg PLoS Pathog. 2018 Dec; 14(12): e1007477. Published online 2018 Dec 10. doi: 10.1371/journal.ppat.1007477 PMID: PMC6301718 Yury A. Bochkov, Kelly Watters, Shamaila Ashraf, Theodor F. Griggs, Mark K. Devries, Daniel J. Jackson, Ann C. Palmenberg, James E. Gern Proc Natl Acad Sci U S A. 2015 Apr 28; 112(17): 5485–5490. Published online 2015 Apr 6. doi: 10.1073/pnas.1421178112 PMID: PMC4418890 Klaus Bønnelykke, Amaziah T. Coleman, Michael D. Evans, Jonathan Thorsen

**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 P16 genes 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.

**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.

**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

**CENPM:** Eftychia Kyriacou, Patrick Heun Epigenetics Chromatin. 2018; 11: 68. Published online 2018 Nov 16. doi: 10.1186/s13072-018-0237-6 PMID: PMC6238281 Stefania Piersanti, Romina Burla, Valerio Licursi, Catarina Brito, Mattia La Torre, Paula M. Alves, Daniel Simao, Carla Mottini, Sara Salinas, Rodolfo Negri, Enrico Tagliafico, Eric J. Kremer, Isabella Saggio PLoS One. 2015; 10(7): e0133607. Published online 2015 Jul 24. doi: 10.1371/journal.pone.0133607 PMID: PMC4514711 Antonio Ramos-Montoya.

Name: Sample

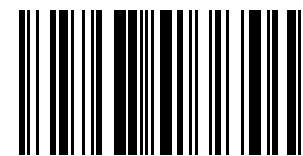
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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.

**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.M111

**CHADL:** Viveka Tillgren, James C. S. Ho, Patrik Önnérjörd, Sebastian Kalamajskij *Biol Chem*. 2015 Jan 9; 290(2): 918–925. Published online 2014 Dec 1. doi: 10.1074/jbc.M114.593541PMCID: PMC4294519Yifan Liu, Yunjie Tu, Ming Zhang, Gaige Ji, Kun Wang, Yanju Shan, Xiaojun Ju, Di Zhang, Jingting Shu, Jianmin Zou *Sci Rep*. 2018; 8: 2015. Published online 2018 Jan 31. doi: 10.1038/s41598-018-20373-6PMCID: PMC5792444Chad I. Lairamore, Mark K. Garrison, Laetitia Bourgeon, Mark Mennemeier *Percept Mot Skills*. A

**CHAT:** Chen E, Lallai V, Sherafat 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.

**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 Experiment*

**CHI3L1:** Breyne K, Steenbrugge J, Demeyere K, et al. Immunomodulation of Host Chitinase 3-Like 1 During a Mammary Pathogenic *Escherichia coli* Infection. *Frontiers in Immunology*. 2018;9:1143. doi:10.3389/fimmu.2018.01143.

**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.

**CHRM3:** McLean LP, Smith A, Cheung L, et al. Type 3 muscarinic receptors contribute to intestinal mucosal homeostasis and clearance of *Nippostrongylus brasiliensis* through induction of TH2 cytokines. *American Journal of Physiology - Gastrointestinal and Liver Physiology*

**CHRNA2:** Heather Nichol, Bénédicte Amilhon, Frédéric Manseau, Saishree Badrinarayanan, Sylvain Williams *Front Cell Neurosci*. 2018; 12: 32. Published online 2018 Feb 13. doi: 10.3389/fncel.2018.00032PMCID: PMC5816824 Shahradd Lotfipour, Janet S. Byun, Prescott Leach, Christie D. Fowler, Niall P. Murphy, Paul J. Kenny, Thomas J. Gould, Jim Boulter *J Neurosci*. Author manuscript; available in PMC 2013 Nov 18. Published in final edited form as: *J Neurosci*. 2013 May 1; 33(18): 10.1523/JNEUROSCI.4731-12.2013

**CHRNA3:** Prato V, Taberner FJ, Hockley JRF, et al. "Genetic identification of mechanoinensitive 'silent' nociceptors." *Cell reports*. 2017;21(11):3102-3115. doi:10.1016/j.celrep.2017.11.066.

**CHRNA4:** Zhang B, Madden P, Gu J, et al. Uncovering the transcriptomic and epigenomic landscape of nicotinic receptor genes in non-neuronal tissues. *BMC Genomics*. 2017;18:439. doi:10.1186/s12864-017-3813-4.

**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

**CHRNA6:** Munguba GC, Geisert EE, Williams RW, et al. Effects of Glaucoma on Chrna6 Expression in the Retina. *Current eye research*. 2013;38(1):10.3109/02713683.2012.724512. doi:10.3109/02713683.2012.724512.

**CHRN1:** Agerholm JS, McEvoy FJ, Menzi F, Jagannathan V, Drögemüller C. A CHRN1 frameshift mutation is associated with familial arthrogryposis multiplex congenita in Red dairy cattle. *BMC Genomics*. 2016;17:479. doi:10.1186/s12864-016-2832-x.

**CHRN3:** Wen L, Han H, Liu Q, et al. Significant association of the CHRN3-CHRNA6 gene cluster with nicotine dependence in the Chinese Han population. *Scientific Reports*. 2017;7:9745. doi:10.1038/s41598-017-09492-8.

**CHRN4:** Decembrini S, Martin C, Sennlaub F, et al. Cone Genesis Tracing by the Chrn4-EGFP Mouse Line: Evidences of Cellular Material Fusion after Cone Precursor Transplantation. *Molecular Therapy*. 2017;25(3):634-653. doi:10.1016/j.ymthe.2016.12.015.

Name: Sample

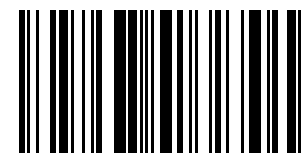
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**CLCN3:** Raul E. Guzman, Alexi K. Alekov, Mikhail Filippov, Jan Hegemann, Christoph Fahlke *Front Cell Neurosci.* 2014; 8: 143. Published online 2014 May 23. doi: 10.3389/fncel.2014.00143 PMID: PMC4033211 Yanmei Qi, Norbert Mair, Kai K. Kummer, Michael G. Leitner, María Camprubí-Robles, Michiel Langeslag, Michaela Kress *Front Mol Neurosci.* 2018; 11: 33. Published online 2018 Feb 9. doi: 10.3389/fnmol.2018.00033 PMID: PMC5811518 Yihe Zhang, Lei Zhou, Juanjuan Zhang, Lichao Zhang, Xiaoyu Yan, Jing Su.

**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.

**CLOCK:** Molecular cloning and characterization of the human CLOCK gene: expression in the suprachiasmatic nuclei. (PMID: 10198158) Steeves TD ... Takahashi JS *Genomics* 1999 23 421 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 Craig *Neuropsychopharmacology.* 2016 Feb; 41(3): 802–810. Prepublished online 2015 Jul 14. Published online 2015 Aug 12. doi: 10.1038/npp.2015.206 PMID: PMC4707826 Gemma de Ramon Francàs, Tobias Alther, Esther T. Stoeckli *Front Neuroanat.* 2017; 11: 76. Published online 2017 Aug 30. doi: 10.3389/fnana.2017.00076 PMID: 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

**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.

**CNNM2:** CNNM2 mutations cause impaired brain development and seizures in patients with hypomagnesemia. (PMID: 24699222) Arjona FJ . Hoenderop JG *PLoS genetics* 2014 23 456 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*

**CNR1:** Sophocleous A, Marino S, Kabir D, Ralston SH, Idris AI. Combined deficiency of the Cnr1 and Cnr2 receptors protects against age-related bone loss by osteoclast inhibition. *Aging Cell.* 2017;16(5):1051-1061. doi:10.1111/acer.12638.

**CNTF:** Kim J-Y, Jeong J-E, Rhee J-K, et al. Targeted exome sequencing for the identification of a protective variant against Internet gaming disorder at rs2229910 of neurotrophic tyrosine kinase receptor, type 3 (NTRK3): A pilot study. *Journal of Behavioral Addi*

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**CNTNAP2:** Zhuoyang Lu, M. V. V. V. Sekhar Reddy, Jianfang Liu, Ana Kalichava, Jiankang Liu, Lei Zhang, Fang Chen, Yun Wang, Luis Marcelo F. Holthausen, 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.

**COL27A1:** Belbin GM, Odgis J, Sorokin EP, et al. Genetic identification of a common collagen disease in Puerto Ricans via identity-by-descent mapping in a health system. McCarthy M, ed. eLife. 2017;6:e25060. doi:10.7554/eLife.25060.

**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

**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/s41598-018-20957-2 PMID: 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

Name: Sample

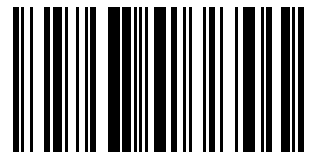
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

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) Gravelins 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 ... 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)

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



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) Punchaichira 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

**CPA6:** Lopes MW, Sapio MR, Leal RB, Fricker LD. Knockdown of Carboxypeptidase A6 in Zebrafish Larvae Reduces Response to Seizure-Inducing Drugs and Causes Changes in the Level of mRNAs Encoding Signaling Molecules. Biagini G, ed. PLoS ONE. 2016;11(4):e0152905.

**CPQ:** Dey S, Parveen A, Tarrant KJ, et al. Whole genome resequencing identifies the CPQ gene as a determinant of ascites syndrome in broilers. Xu P, ed. PLoS ONE. 2018;13(1):e0189544. doi:10.1371/journal.pone.0189544.

**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

**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.

**CREB1:** Sunkel B, Wu D, Chen Z, et al. Integrative analysis identifies targetable CREB1/FoxA1 transcriptional co-regulation as a predictor of prostate cancer recurrence. Nucleic Acids Research. 2016;44(9):4105-4122. doi:10.1093/nar/gkv1528.

**CRHR1:** Julia Bender, Maik Engeholm, Marion S. Ederer, Johannes Brey, Thor C. Møller, Stylianos Michalakis, Tamas Rasko, Erich E. Wanker, Martin Biel, Karen L. Martinez, Wolfgang Wurst, Jan M. Deussing PLoS One. 2015; 10(9): e0136768. Published online 2015 Sep 9. doi: 10.1371/journal.pone.0136768 PMID: PMC4564177 Androniki Raftogianni, Lena C. Roth, Diego García-González, Thorsten Bus, Claudia Kühne, Hannah Monyer, Daniel J. Spergel, Jan M. Deussing, Valery Grinevich Front 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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**CRY1:** Xin Tong, Deqiang Zhang, Anirvan Guha, Blake Arthurs, Victor Cazares, Neil Gupta, Lei Yin PLoS One. 2015; 10(10): e0139725. Published online 2015 Oct 2. doi: 10.1371/journal.pone.0139725 PMID: PMC4592254 Anand R. Saran, Diana Kalinowska, Sangphil Oh, Ralf Janknecht, Luciano DiTacchio PLoS Biol. 2018 Nov; 16(11): e2006145. Published online 2018 Nov 30. doi: 10.1371/journal.pbio.2006145 PMID: PMC6291157 Anand R. Saran, Diana Kalinowska, Sangphil Oh, Ralf Janknecht, Luciano DiTacchio PLoS Biol. 201

**CRY2:** Liting Duan, Jen Hope, Qunxiang Ong, Hsin-Ya Lou, Namdoo Kim, Comfrey McCarthy, Victor Acero, Michael Z. Lin, Bianxiao Cui Nat Commun. 2017; 8: 547. Published online 2017 Sep 15. doi: 10.1038/s41467-017-00648-8 PMID: PMC5601944 Guido Weidler, Sven zur Oven-Krockhaus, Michael Heunemann, Christian Orth, Frank Schleifenbaum, Klaus Harter, Ute Hoecker, Alfred Batschauer Plant Cell. 2012 Jun; 24(6): 2610-2623. Published online 2012 Jun 26. doi: 10.1105/tpc.112.098210 PMID: PMC3406922 Daphne L. Che,

**CSF2RA:** Chiu C-Y, Su S-C, Fan W-L, et al. Whole-Genome Sequencing of a Family with Hereditary Pulmonary Alveolar Proteinosis Identifies a Rare Structural Variant Involving CSF2RA/CRLF2/IL3RA Gene Disruption. Scientific Reports. 2017;7:43469. doi:10.1038/srep43469

**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.

**CSNK1E:** Zhou L, Bryant CD, Loudon A, Palmer AA, Vitaterna MH, Turek FW. The Circadian Clock Gene Csnk1e Regulates Rapid Eye Movement Sleep Amount, and Nonrapid Eye Movement Sleep Architecture in Mice. Sleep. 2014;37(4):785-793. doi:10.5665/sleep.3590.

**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.

**CTNNA2:** Ehlers CL, Gizer IR, Bizon C, et al. Single Nucleotide Polymorphisms in the REG-CTNNA2 region of chromosome 2 and NEIL3 associated with impulsivity in a Native American sample. Genes, brain, and behavior. 2016;15(6):568-577. doi:10.1111/gbb.12297.

**CTNNA3:** Bing He, Ting Li, Lei Guan, Fang-E Liu, Xue-Mei Chen, Jing Zhao, Song Lin, Zhi-Zhen Liu, Hu-Qin Zhang Oncotarget. 2016 Feb 16; 7(7): 8078-8089. Published online 2016 Jan 22. doi: 10.18632/oncotarget.6978 PMID: PMC4884977 Elena Bacchelli, Fabiola Ceroni, Dalila Pinto, Silvia Lomartire, Maila Giannandrea, Patrizia D'Adamo, Elena Bonora, Piero Parchi, Raffaella Tancredi, Agatino Battaglia, Elena Maestrini J Neurodev Disord. 2014; 6(1): 17. Published online 2014 Jul 10. doi: 10.1186/1866-1955-6-17

**CTNBL1:** Van Maldegem F, Maslen S, Johnson CM, et al. CTNBL1 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.

**CTNND2:** Tychele N. Turner, Kamal Sharma, Edwin C. Oh, Yangfan P. Liu, Ryan L. Collins, Maria X. Sosa, Dallas R. Auer, Harrison Brand, Stephan J. Sanders, Daniel Moreno-De-Luca, Vasyl Pihur, Teri Plona, Kristen Pike, Daniel R. Soppet, Michael W. Smith, Sau Wai Cheung, Christa Lese Martin, Matthew W. State, Michael E. Talkowski, Edwin Cook, Richard Haganir, Nicholas Katsanis, Aravinda Chakravarti Nature. 2015 Apr 2; 520(7545): 51-56. Published online 2015 Mar 25. doi: 10.1038/nature14186 PMID: PMC438

**CTSD:** Wu P, Yuan X, Li F, et al. Myocardial Upregulation of Cathepsin D by Ischemic Heart Disease Promotes Autophagic Flux and Protects Against Cardiac Remodeling and Heart Failure. Circulation Heart failure. 2017;10(7):e004044. doi:10.1161/CIRCHEARTFAILURE.117

Name: Sample

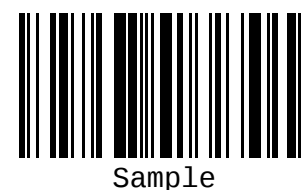
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**CUX2:** Tara L. Conforto, Yijing Zhang, Jennifer Sherman, David J. Waxman *Mol Cell Biol.* 2012 Nov; 32(22): 4611–4627. doi: 10.1128/MCB.00886-12 PMID: PMC3486175 Makiko Yamada, Jessica Clark, Christine McClelland, Emily Capaldo, Ayush Ray, Angelo Iulianella *Hippocampus.* 2015 Feb; 25(2): 253–267. Published online 2014 Oct 3. doi: 10.1002/hipo.22370 PMID: PMC4312975 Ranjana Pal, Zubaidah M. Ramdzan, Simran Kaur, Philippe M. Duquette, Richard Marcotte, Lam Leduy, Sayeh Davoudi, Nathalie Lamarche-Vane.

**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.

**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*

**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 Kállay *Int 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 Kumar *Endocr 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.

**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.112.046094 PMID: PMC3533429 Hongming Liu, Guiyu Lou, Chong

**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 Rodrigues *Drug Metab Dispos.* 2013 Aug; 41(8): 1566–1574. Published online 2013 Aug. doi: 10.1124/dmd.112.049940 PMID: PMC3716306 Carrie A. Vyhlidal, Robin E. Pearce, Roger Gaedigk, Justina C. Calamia, Diana L. Shuster, Kenneth E. Thummel, J. Steven Leeder *Drug Metab Dispos.* 2015 Aug; 43(8): 1286–1293. Published online 2015 Aug. doi: 10.1124/dmd.115.064998 Correction in: *Drug Metab Di*

**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.

**DAO:** Vinita Jagannath, Zacharias Faidon Brotzakis, Michele Parrinello, Susanne Walitza, Edna Grünblatt *Front Mol Neurosci.* 2017; 10: 342. Published online 2017 Oct 24. doi: 10.3389/fnmol.2017.00342 PMID: PMC5660716 David Pritchett, Sibah Hasan, Shu K. E. Tam, Sandra J. Engle, Nicholas J. Brandon, Trevor Sharp, Russell G. Foster, Paul J. Harrison, David M. Bannerman, Stuart N. Peirson *Eur J Neurosci.* 2015 May; 41(9): 1167–1179. Published online 2015 Mar 27. doi: 10.1111/ejn.12880 PMID: PMC4744680 Vin

**DAPK1:** Dayton J. Goodell, Vincent Zaegel, Steven J. Coultrap, Johannes W. Hell, K. Ulrich Bayer *Cell 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.2017.05.068 PMID: PMC5549467 Lei 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.

Name: Sample

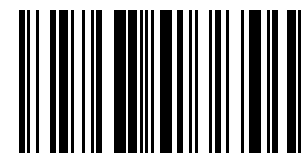
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Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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.

**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.

**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.

**DCTN6:** Wang Q, Wang X, Liang Q, et al. Prognostic Value of Dynactin mRNA Expression in Cutaneous Melanoma. *Medical Science Monitor?: International Medical Journal of Experimental and Clinical Research.* 2018;24:3752-3763. doi:10.12659/MSM.910566.

**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 Lohmann *J Virol.* 2015 Oct 15; 89(20): 10548–10568. Published online 2015 Aug 12. doi: 10.1128/JVI.01297-15 PMID: PMC4580188 Rana Khsheibun, Tamar Paperna, Anat Volkowich, Izabella Lejbkowicz, Nili Avidan, Ariel Miller *PLoS 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

**DEPDC5:** Hortense de Calbiac, Adriana Dabacan, Elise Marsan, Hervé Tostivint, Gabrielle Devienne, Saeko Ishida, Eric Leguern, Stéphanie Baulac, Raul C. Muresan, Edor Kabashi, Sorana Ciura *Ann Clin Transl Neurol.* 2018 May; 5(5): 510–523. Published online 2018 Apr 6. doi: 10.1002/acn3.542 PMID: PMC5945968 James Hughes, Ruby Dawson, Melinda Tea, Dale McAninch, Sandra Piltz, Dominique Jackson, Laura Stewart, Michael G. Ricos, Leanne M. Dibbens, Natasha L. Harvey, Paul Thomas *Sci Rep.* 2017; 7: 12618.

**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*

**DGKI:** The cloning and characterization of a novel human diacylglycerol kinase, DGKiota. (PMID: 9830018) Ding L . Prescott SM *The Journal of biological chemistry* 1998 2 3 4 23 56 Genome-wide association study implicates PARD3B-based AIDS restriction. (PMID: 21502085) Troyer JL . O'Brien SJ *The Journal of infectious diseases* 2011 3 43 56 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE . Uhl GR *Molecular medicin*

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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.

**DISC1:** Tropea D, Hardingham N, Millar K, Fox K. Mechanisms underlying the role of DISC1 in synaptic plasticity. *The Journal of Physiology*. 2018;596(14):2747-2771. doi:10.1113/JP274330.

**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 Faccio *J Exp Med*. 2016 May 2; 213(5): 827–840. doi: 10.1084/jem.20150950 PMCID: PMC4854727 Phillip 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

**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. Lowy *J 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. Lowy *J Cell Biol*. 2014 Dec 8; 207(5): 627–642. doi: 10.1083/jcb.201405105 PMCID: PMC4259810 Choon Kiat Sim, Sun-Yee

**DLG2:** Claudio Reggiani, Sandra Coppens, Tayeb Sekhara, Ivan Dimov, Bruno Pichon, Nicolas Lufin, Marie-Claude Addor, Elga Fabia Belligni, Maria Cristina Digilio, Flavio Faletta, 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. Trinh *PLoS O*

**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.112.103135 PMCID: 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.

**DNMT1:** Yuan Z, Claros CS, Suzuki M, et al. Loss of MEN1 activates DNMT1 implicating DNA hypermethylation as a driver of MEN1 tumorigenesis. *Oncotarget*. 2016;7(11):12633-12650. doi:10.18632/oncotarget.7279.

**DOCK4:** Abraham S, Scarcia M, Bagshaw RD, et al. A Rac/Cdc42 exchange factor complex promotes formation of lateral filopodia and blood vessel lumen morphogenesis. *Nature Communications*. 2015;6:7286. doi:10.1038/ncomms8286.

**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.

#### DPCR1:

**DPP10:** Zhang Y, Poobalasingam T, Yates LL, et al. Manipulation of dipeptidylpeptidase 10 in mouse and human in vivo and in vitro models indicates a protective role in asthma. *Disease Models & Mechanisms*. 2018;11(1):dmm031369. doi:10.1242/dmm.031369.

**DRD1:** Dopamine genes and pathological gambling in discordant sib-pairs. (PMID: 17394052) da Silva Lobo DS . Kennedy JL *Journal of gambling studies* 2007 3 23 26 45 58 Polymorphisms in dopamine receptor DRD1 and DRD2 genes and psychopathological and extrapyramidal symptoms in patients on long-term antipsychotic treatment. (PMID: 17455212) Dolzan V . Breskvar K *American journal of medical genetics. Part B, Neuropsychiatric genetics : the official publication of the International Society of Psychiatr*

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**DRD2:** Association of DRD2 polymorphisms and chlorpromazine-induced extrapyramidal syndrome in Chinese schizophrenic patients. (PMID: 16867246) Wu SN . He L *Acta pharmacologica Sinica* 2006 3 23 26 45 58 Association of the -141C Del variant of the dopamine D2 receptor (DRD2) with positive family history and suicidality in German alcoholics. (PMID: 15389757) Johann M . Wodarz N *American journal of medical genetics. Part B, Neuropsychiatric genetics : the official publication of the International Soc*

**DRD3:** A functional variant of the dopamine D3 receptor is associated with risk and age-at-onset of essential tremor. (PMID: 16809426) Jeanneteau F . Sokoloff P *Proceedings of the National Academy of Sciences of the United States of America* 2006 Further evidence of no association between Ser9Gly polymorphism of dopamine D3 receptor gene and schizophrenia. (PMID: 9034004) Chen CH . Hsiao KJ *American journal of medical genetics* 1997 3 4 23 45 58 Genetic polymorphisms in the dopamine-2 receptor (DRD2)

**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

**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.

**DUOX2:** Ueyama T, Sakuma M, Ninoyu Y, et al. The Extracellular A-loop of Dual Oxidases Affects the Specificity of Reactive Oxygen Species Release. *The Journal of Biological Chemistry*. 2015;290(10):6495-6506. doi:10.1074/jbc.M114.592717.

**DYRK1A:** DYRK1A and DYRK3 promote cell survival through phosphorylation and activation of SIRT1. (PMID: 20167603) Guo X . Li X *The Journal of biological chemistry* 2010 3 4 23 56 DYRK1A genetic variants are not linked to Alzheimer's disease in a Spanish case-control cohort. (PMID: 19995442) Vázquez-Higuera JL . Combarros O *BMC medical genetics* 2009 3 23 43 56 Human minibrain homologue (MNBH/DYRK1): characterization, alternative splicing, differential tissue expression, and overexpression in Down synd

**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;

**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

Name: Sample

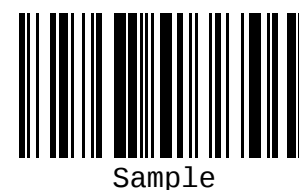
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**EFHC1:** Laurence de Nijs, Nathalie Wolkoff, Bernard Coumans, Antonio V. Delgado-Escueta, Thierry Grisar, Bernard Lakaye Hum Mol Genet. 2012 Dec 1; 21(23): 5106–5117. Published online 2012 Aug 27. doi: 10.1093/hmg/ddc356 PMID: PMC3490517 Ryan L Subaran, Juliette M Conte, William C L Stewart, David A Greenberg Epilepsia. 2015 Feb; 56(2): 188–194. Published online 2014 Dec 8. doi: 10.1111/epi.12864 PMID: PMC4354299 Romita Thounaojam, Leader Langbang, Kavish Itisham, Roohollah Sobhani, Shivani Srivastav

**EGFLAM:** Yoshiji Yamada, Jun Sakuma, Ichiro Takeuchi, Yoshiki Yasukochi, Kimihiko Kato, Mitsutoshi Oguri, Tetsuo Fujimaki, Hideki Horibe, Masaaki Muramatsu, Motoji Sawabe, Yoshinori Fujiwara, Yu Taniguchi, Shuichi Obuchi, Hisashi Kawai, Shoji Shinkai, Seiji Mori, Tomio Arai, Masashi Tanaka Int J Mol Med. 2017 May; 39(5): 1091–1100. Published online 2017 Mar 21. doi: 10.3892/ijmm.2017.2927 PMID: PMC5403497 Masanobu Abe, Satoshi Yamashita, Yoshiyuki Mori, Takahiro Abe, Hideto Saijo, Kazuto Hoshi, Tosh

**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.

**EIF3G:** Dreisig K, Kornum BR. A critical look at the function of the P2Y11 receptor. Purinergic Signalling. 2016;12(3):427-437. doi:10.1007/s11302-016-9514-7.

**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.

**ELP1:** Tissue-specific expression of a splicing mutation in the IKBKAP gene causes familial dysautonomia. (PMID: 11179008) Slaugenhaupt SA . Gusella JF American journal of human genetics 2001 2 3 4 23 56 Purification and characterization of the human elongator complex. (PMID: 11714725) Hawkes NA . Svejstrup JQ The Journal of biological chemistry 2002 3 4 23 56 Familial dysautonomia is caused by mutations of the IKAP gene. (PMID: 11179021) Anderson SL . Rubin BY American journal of human genetics 2

**EN2:** Genestine M, Lin L, Durens M, et al. Engrailed-2 (En2) deletion produces multiple neurodevelopmental defects in monoamine systems, forebrain structures and neurogenesis and behavior. Human Molecular Genetics. 2015;24(20):5805-5827. doi:10.1093/hmg/ddv301.

**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.

**EP300:** Molecular cloning and functional analysis of the adenovirus E1A-associated 300-kD protein (p300) reveals a protein with properties of a transcriptional adaptor. (PMID: 7523245) Eckner R . Livingston DM Genes & development 1994 2 3 4 23 56 Screening and association testing of common coding variation in steroid hormone receptor co-activator and co-repressor genes in relation to breast cancer risk: the Multiethnic Cohort. (PMID: 19183483) Haiman CA . Press MF BMC cancer 2009 3 23 43 56 The SIR

**EPAS1:** Peng Y, Cui C, He Y, et al. Down-Regulation of EPAS1 Transcription and Genetic Adaptation of Tibetans to High-Altitude Hypoxia. Molecular Biology and Evolution. 2017;34(4):818-830. doi:10.1093/molbev/msw280.

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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.

**ERBB4:** ERBB4 mutations that disrupt the neuregulin-ErbB4 pathway cause amyotrophic lateral sclerosis type 19. (PMID: 24119685) Takahashi Y ... Tsuji S *American journal of human genetics* 2013 3 4 72 Identification of neuroglycan C and interacting partners as potential susceptibility genes for schizophrenia in a Southern Chinese population. (PMID: 19367581) So HC ... Sham PC *American journal of medical genetics. Part B, Neuropsychiatric genetics : the official publication of the International Society of Psychiatric Genetics* 2010 3 22 40 Somatic mutations of ErbB4: selective loss-of-function phenotype affecting signal transduction pathways in cancer. (PMID: 19098003) Tvorogov D ... Elenius K *The Journal of biological chemistry* 2009 3 4 22 WW domain containing E3 ubiquitin protein ligase 1 targets the full-length ErbB4 for ubiquitin-mediated degradation in breast cancer. (PMID: 19561640) Li Y ... Chen C *Oncogene* 2009 3 4 22 Analysis of the tyrosine kinome in melanoma reveals recurrent mutations in ERBB4. (PMID: 19718025) Prickett TD ... Samuels Y *Nature genetics* 2009

**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*

**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.

**EVA1A:** Mengtao Li, Guang Lu, Jia Hu, Xue Shen, Jiabao Ju, Yuanxu Gao, Liuqing Qu, Yan Xia, Yingyu Chen, Yun Bai *Stem Cell Reports*. 2016 Mar 8; 6(3): 396-410. Published online 2016 Feb 18. doi: 10.1016/j.stemcr.2016.01.011 PMID: PMC4788774 Xin Lin, Ming Cui, Dong Xu, Dubeiqi Hong, Yan Xia, Chentong Xu, Riyong Li, Xuan Zhang, Yaxin Lou, Qihua He, Ping Lv, Yingyu Chen *Cell Death Dis*. 2018 Jul; 9(7): 768. Published online 2018 Jul 10. doi: 10.1038/s41419-018-0800-x PMID: PMC6039435 Shu Zhang, Xin Lin.

**FAAH:** Carey LM, Slivicki RA, Leishman E, et al. A pro-nociceptive phenotype unmasked in mice lacking fatty-acid amide hydrolase. *Molecular Pain*. 2016;12:1744806916649192. doi:10.1177/1744806916649192.

**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.

**FABP7:** De Rosa A, Pellegatta S, Rossi M, et al. A Radial Glia Gene Marker, Fatty Acid Binding Protein 7 (FABP7), Is Involved in Proliferation and Invasion of Glioblastoma Cells. Kotliarova S, ed. *PLoS ONE*. 2012;7(12):e52113. doi:10.1371/journal.pone.0052113.

**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.

**FAM109A:** Orrù G, Carta MG. Genetic Variants Involved in Bipolar Disorder, a Rough Road Ahead. *Clinical Practice and Epidemiology in Mental Health?: CP & EMH*. 2018;14:37-45. doi:10.2174/1745017901814010037.

**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. Chumakov *PLoS One*. 2018; 13(2): e0191107. Published online 2018 Feb 8. doi: 10.1371/journal.pone.0191107 PMID: PMC5805170 Eva Sigstad, Elisabeth Paus, Trine Bjørø, Aasmund Berner, Krystyna Kotanska Grøholt, Lars H Jørgensen, Manuel Sobrinho-Simões, Ruth Holm, David J Warren *Mod Pathol*. 2012 Apr; 25(4): 537-547. Published online 2011 Dec 9. doi: 10.1038/modpathol.2011.188 PMID: PMC3318159 Greg L. Shaw

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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

**FAM227B:** 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 3 4 E3 ubiquitin ligase RNF123 targets lamin B1 and lamin-binding proteins. (PMID: 29676528) Khanna R ... Parnaik VK *The FEBS journal* 2018 3 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 3 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

**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.

**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.

**FAM86B3P:** Toward an understanding of the protein interaction network of the human liver. (PMID: 21988832) Wang J . Yang X *Molecular systems biology* 2011 3 56 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 56 The sequence of the human genome. (PMID: 11181995) Venter JC . Zhu X *Science (New York, N*

**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 Anaid 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

**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.

**FBXL17:** Dimerization quality control ensures neuronal development and survival. (PMID: 30190310) Mena EL . Rape M *Science (New York, N.Y.)* 2018 3 4 56 SCF (Fbxl17) ubiquitylation of Sufu regulates Hedgehog signaling and medulloblastoma development. (PMID: 27234298) Raducu M . D'Angiolella V *The EMBO journal* 2016 3 4 56 Parallel SCF adaptor capture proteomics reveals a role for SCFFBXL17 in NRF2 activation via BACH1 repressor turnover. (PMID: 24035498) Tan MK . Harper JW *Molecular cell* 2013 3 4 56 P

**FCHSD1:** 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.

Name: Sample

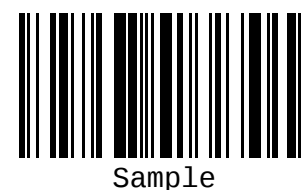
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**FGF12:** Yukiko Hanada, Yukiko Nakamura, Yoshiyuki Ozono, Yusuke Ishida, Yasumitsu Takimoto, Manabu Taniguchi, Kazuya Ohata, Yoshihisa Koyama, Takao Imai, Tetsuo Morihana, Makoto Kondo, Takashi Sato, Hidenori Inohara, Shoichi Shimada Sci Rep. 2018; 8: 11491. Published online 2018 Jul 31. doi: 10.1038/s41598-018-28618-0PMCID: PMC6068167 Qianqian Li, Yuanyuan Zhao, Gang Wu, Shanshan Chen, Yingchao Zhou, Sisi Li, Mengchen Zhou, Qian Fan, Jieli Pu, Kui Hong, Xiang Cheng, Qing Kenneth Wang, Xin Tu J Am Hea

**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.

**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.

**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.

**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.

#### FLJ41278:

**FMNL1:** Formin-like 1 (FMNL1) is regulated by N-terminal myristoylation and induces polarized membrane blebbing. (PMID: 19815554) Han Y ... Krackhardt AM The Journal of biological chemistry 2009 3 4 22 Identification and characterization of human FMNL1, FMNL2 and FMNL3 genes in silico. (PMID: 12684686) Katoh M ... Katoh M International journal of oncology 2003 2 3 22 The NIK protein kinase and C17orf1 genes: chromosomal mapping, gene structures and mutational screening in frontotemporal dementia and parkinsonism linked to chromosome 17. (PMID: 9799091) Aronsson FC ... Brookes AJ Human genetics 1998 2 3 4 Identification and characterization of a set of conserved and new regulators of cytoskeletal organization, cell morphology and migration. (PMID: 21834987) Bai SW ... Ridley AJ BMC biology 2011 3 4 Bi-modal regulation of a formin by srGAP2. (PMID: 21148482) Mason FM ... Soderling SH The Journal of biological chemistry 2011

**FMNL2:** Grobe H, Wüstenhagen A, Baarlink C, Grosse R, Grikscheit K. A Rac1-FMNL2 signaling module affects cell-cell contact formation independent of Cdc42 and membrane protrusions. Komarova Y, ed. PLoS ONE. 2018;13(3):e0194716. doi:10.1371/journal.pone.0194716.

**FMR1:** (PMID: 19097999) Föhling M . Scholz H The Journal of biological chemistry 2009 3 4 23 58 Screening for the presence of FMR1 premutation alleles in women with parkinsonism. (PMID: 19204162) Cilia R . Tassone F Archives of neurology 2009 3 23 45 58 The G-quartet containing FMRP binding site in FMR1 mRNA is a potent exonic splicing enhancer. (PMID: 18653529) Didiot MC . Moine H Nucleic acids research 2008 3 4 23 58 Methylation regulates the intracellular protein-protein and protein-RNA interac

**FOXE1:** 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.

#### FOXP2:

**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.

Name: Sample

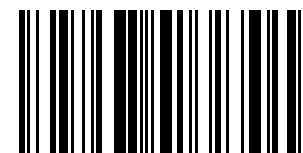
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Sample

**FSIP1:** Meisi Yan, Jinsong Wang, Yanlv Ren, Lin Li, Weidan He, Ying Zhang, Tong Liu, Zhigao Li Cell Death Dis. 2019 Mar; 10(3): 204. Published online 2019 Feb 27. doi: 10.1038/s41419-018-1248-8 PMID: 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 Liu Proc Natl Acad Sci U S A. 2017 Jul 18;

**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. Yeo Mol Metab. 2015 Apr; 4(4): 287-298. Published online 2015 Feb 7. doi: 10.1016/j.molmet.2015.01.011 PMID: PMC4354923 Daniel P. S. Osborn, Rosa Maria Roccasecca, Fiona McMurray, Victor Hernandez-Hernandez, Sriparna Mukherjee, Inês Barroso, Derek Stemple, Roger Cox, Philip L. Beales, Sonia Christou-Savina PLoS 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

**FUNDC1:** Ziheng Chen, Lei Liu, Qi Cheng, Yanjun Li, Hao Wu, Weilin Zhang, Yueying Wang, Sheikh Arslan Sehgal, Sami Siraj, Xiaohui Wang, Jun Wang, Yushan Zhu, Quan Chen EMBO Rep. 2017 Mar; 18(3): 495-509. Published online 2017 Jan 19. doi: 10.15252/embr.201643309 PMID: PMC5331199 Ming Chen, Ziheng Chen, Yueying Wang, Zheng Tan, Chongzhuo Zhu, Yanjun Li, Zhe Han, Linbo Chen, Ruize Gao, Lei Liu, Quan Chen Autophagy. 2016 Apr; 12(4): 689-702. Published online 2016 Apr 6. doi: 10.1080/15548627.2016.1151580P

**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.

**FYN:** The association study of three FYN polymorphisms with prophylactic lithium response in bipolar patients. (PMID: 19330793) Szczepankiewicz A . Rybakowski JK Human psychopharmacology 2009 3 23 43 56 Fyn phosphorylates human MAP-2c on tyrosine 67. (PMID: 15536091) Zamora-Leon SP . Shafit-Zagardo B The Journal of biological chemistry 2005 3 4 23 56 Regulation of ultraviolet B-induced phosphorylation of histone H3 at serine 10 by Fyn kinase. (PMID: 15537652) He Z . Dong Z The Journal of biologic

**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/journal

**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.

**GABBR2:** Hamdan FF, Myers CT, Cossette P, et al. High Rate of Recurrent De Novo Mutations in Developmental and Epileptic Encephalopathies. American Journal of Human Genetics. 2017;101(5):664-685. doi:10.1016/j.ajhg.2017.09.008.

**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.

**GABRA2:** Gonzalez-Nunez V. Role of gabra2, GABAA receptor alpha-2 subunit, in CNS development. Biochemistry and Biophysics Reports. 2015;3:190-201. doi:10.1016/j.bbrep.2015.08.003.

**GABRA4:** Pathway-based association analysis of genome-wide screening data suggest that genes associated with the gamma-aminobutyric acid receptor signaling pathway are involved in neuroleptic-induced, treatment-resistant tardive dyskinesia. (PMID: 18334916) Inada T . Arinami T Pharmacogenetics and genomics 2008 3 23 45 58 Identification of significant association and gene-gene interaction of GABA receptor subunit genes in autism. (PMID: 16080114). Single nucleotide polymorphisms predict symptom severity

Name: Sample

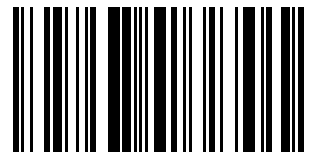
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Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**GABRB1:** Epileptic encephalopathy de novo GABRB mutations impair  $\gamma$ -aminobutyric acid type A receptor function. (PMID: 26950270) Janve VS ... Macdonald RL *Annals of neurology* 2016 3 4 71 Protein interaction network of alternatively spliced isoforms from brain links genetic risk factors for autism. (PMID: 24722188) Corominas R ... Iakoucheva LM *Nature communications* 2014 3 4 De novo mutations in epileptic encephalopathies. (PMID: 23934111) Epi4K Consortium ... Winawer MR *Nature* 2013 4 71 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 40 Association study of 182 candidate genes in anorexia nervosa. (PMID: 20468064) Pinheiro AP ... Woodside DB *American journal of medical genetics. Part B, Neuropsychiatric genetics : the official publication of the International Society of Psychiatric Genetics* 2010

**GABRB3:** Ryan J. Delahanty, Yanfeng Zhang, Terry Jo Bichell, Wangzhen Shen, Kelienne Verdier, Robert L. Macdonald, Lili Xu, Kelli Boyd, Janice Williams, Jing-Qiong Kang *Cell 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.2016.11.067 PMID: PMC5240804 Audrey A Mercer, Kristin J Palarz, Nino Tabatadze, Catherine S Woolley, Indira M Ramane *Life.* 2016; 5: e07596. Published online 2016 Apr 14. doi: 10.75

**GABRG2:** Timothy A. Warner, Wangzhen Shen, Xuan Huang, Zhong Liu, Robert L. Macdonald, Jing-Qiong Kang *Hum Mol Genet.* 2016 Aug 1; 25(15): 3192-3207. Published online 2016 Jun 23. doi: 10.1093/hmg/ddw168 PMID: PMC5179921 Timothy A. Warner, Zhong Liu, Robert L. Macdonald, Jing-Qiong Kang *Epilepsy Res. Author manuscript; available in PMC 2018 Aug 1. Published in final edited form as: Epilepsy Res.* 2017 Aug; 134: 1-8. Published online 2017 Apr 30.

**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*

**GAD2:** Association analysis of the glutamic acid decarboxylase 2 and the glutamine synthetase genes (GAD2, GLUL) with schizophrenia. (PMID: 19125103) Arai S . Fukumaki Y *Psychiatric genetics* 2009 3 23 45 58 GAD2 gene sequence variations are associated with eating behaviors and weight gain in women from the Quebec family study. (PMID: 19686769) Choquette AC . Pérusse L *Physiology & behavior* 2009 3 23 45 58 Mutation screen of the GAD2 gene and association study of alcoholism in three populations. (P

**GADL1:** Raasakka A, Mahootchi E, Winge I, Luan W, Kursula P, Haavik J. Structure of the mouse acidic amino acid decarboxylase GADL1. *Acta Crystallographica Section F, Structural Biology Communications.* 2018;74(Pt 1):65-73. doi:10.1107/S2053230X17017848.

**GALM:** Hiesgen R, Helmly S, Galm I, Morawietz T, Handl M, Friedrich KA. Microscopic Analysis of Current and Mechanical Properties of Nafion® Studied by Atomic Force Microscopy. *Membranes.* 2012;2(4):783-803. doi:10.3390/membranes2040783.

**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.

**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.

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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. Channon *Dev Biol.* 2015 Mar 1; 399(1): 129–138. doi: 10.1016/j.ydbio.2014.12.025 PMID: PMC4347993 Katja Zschiebsch, Caroline Fischer, Annett Wilken-Schmitz, Gerd Geisslinger, Keith Channon, Katrin Watschinger, Irmgard Tegeder *J Cell Mol Med.* 2019 Feb; 23(2): 985–1000. Published online 2018 Nov 18.

**GCKR:** Zhao Yang Wang, Ling Jin, Huanran Tan, David M. Irwin *PLoS One.* 2013; 8(4): e60896. Published online 2013 Apr 1. doi: 10.1371/journal.pone.0060896 PMID: PMC3613411 Ling 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 Tan *Int J Mol Sci.* 2015 Apr; 16(4): 7377–7393. Published online 2015 Apr 2. doi: 10.3390/ijms16047377 PMID: PMC4425023 Maykel López Rodríguez, Lilian Fernandes Silva, Jagadish Va

**GCLM:** Jinhwan Lim, Brooke N. Nakamura, Isaac Mohar, Terrance J. Kavanagh, Ulrike Luderer *Endocrinology.* 2015 Sep; 156(9): 3329–3343. Published online 2015 Jun 17. doi: 10.1210/en.2015-1206 PMID: PMC4541624 Chad S. Weldy, Ian P. Luttrell, Collin C. White, Vicki Morgan-Stevenson, Theo K. Bammler, Richard P. Beyer, Zahra Afsharinejad, Francis Kim, Kanchan Chitale, Terrance J. Kavanagh *Free Radic Biol Med.* Author manuscript; available in PMC 2013 Sep 15. Published in final edited form as: *Free Radic Bio*

**GFAP:** Lin N-H, Messing A, Perng M-D. Characterization of a panel of monoclonal antibodies recognizing specific epitopes on GFAP. Strnad P, ed. *PLoS ONE.* 2017;12(7):e0180694. doi:10.1371/journal.pone.0180694.

**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

**GJB2:** Mikstiene V, Jakaitiene A, Byckova J, et al. The high frequency of GJB2 gene mutation c.313\_326del14 suggests its possible origin in ancestors of Lithuanian population. *BMC Genetics.* 2016;17:45. doi:10.1186/s12863-016-0354-9.

**GLCCI1:** Kim S-H, Kim H-J, Kim C-W. GLCCI1 is a novel component associated with the PI3K signaling pathway in podocyte foot processes. *Experimental & Molecular Medicine.* 2016;48(5):e233-. doi:10.1038/emm.2016.28.

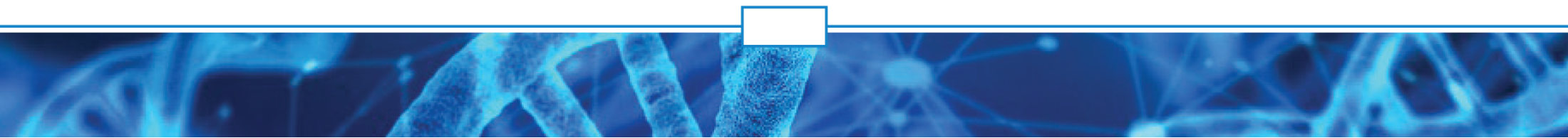
**GLIS1:** Tasic M, Allen A, Willmann D, et al. Lsd1 regulates skeletal muscle regeneration and directs the fate of satellite cells. *Nature Communications.* 2018;9:366. doi:10.1038/s41467-017-02740-5.

**GLIS3:** GLIS3, a novel member of the GLIS subfamily of Krüppel-like zinc finger proteins with repressor and activation functions. (PMID: 14500813) Kim YS . Jetten AM *Nucleic acids research* 2003 2 3 4 23 56 Meta-analysis of genome-wide association studies identifies eight new loci for type 2 diabetes in east Asians. (PMID: 22158537) Cho YS . Seielstad M *Nature genetics* 2011 3 43 56 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 203

**GLRA1:** Mutations in the alpha 1 subunit of the inhibitory glycine receptor cause the dominant neurologic disorder, hyperekplexia. (PMID: 8298642) Shiang R . Wasmuth JJ *Nature genetics* 1993 2 3 4 23 58 Alanine-scanning mutagenesis in the signature disulfide loop of the glycine receptor alpha 1 subunit: critical residues for activation and modulation. (PMID: 15287733) Schofield CM . Harrison NL *Biochemistry* 2004 3 23 26 58 Novel GLRA1 missense mutation (P250T) in dominant hyperekplexia defines an in

**GLRB:** The human glycine receptor beta subunit gene (GLRB): structure, refined chromosomal localization, and population polymorphism. (PMID: 9676428) Milani N . Becker CM *Genomics* 1998 2 3 4 23 58 The human glycine receptor beta subunit: primary structure, functional characterisation and chromosomal localisation of the human and murine genes. (PMID: 8717357) Handford CA . Schofield PR *Brain research. Molecular brain research* 1996 2 3 4 23 58 Hyperekplexia associated with compound heterozygote muta

**GLT8D1:**



Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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 PMID: 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 PMID: 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.

**GNB1L:** Sun Y, Tao Y, Wang J, Saffen D. The schizophrenia/bipolar disorder candidate gene GNB1L is regulated in human temporal cortex by a cis-acting element located within the 3'-region. *Neuroscience Bulletin*. 2015;31(1):43-52. doi:10.1007/s12264-014-1461-0.

**GNB3:** Ozdemir AC, Wynn GM, Vester A, et al. GNB3 overexpression causes obesity and metabolic syndrome. Chan CB, ed. *PLoS ONE*. 2017;12(12):e0188763. doi:10.1371/journal.pone.0188763.

**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.

**GOSR2:** Roman Prashberger, Simon A. Lowe, Nancy T. Malintan, Carlo N.G. Giachello, Nian Patel, Henry Houlden, Dimitri M. Kullmann, Richard A. Baines, Maria M. Usowicz, Shyam S. Krishnakumar, James J.L. Hodge, James E. Rothman, James E.C. Jepsen *Cell Rep*. 2017 Oct 3; 21(1): 97–109. Published online 2017 Oct 3. doi: 10.1016/j.celrep.2017.09.004 PMID: PMC5640804 Jörn M. Völker, Mykola Dergai, Luciano A. Abriata, Yves Mingard, Daniel Ysselstein, Dimitri Krainc, Matteo Dal Peraro.

**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 PMID: 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 PMID: PMC4832925 Alexander G. Bassuk, Lakshmi B. Muthuswamy, Riley Boland, Tiffany L. Smith, Alissa M. Huls

**GPM6A:** Nicolás M. Rosas, Anabel Alvarez Juliá, Sofia E. Alzuri, Alberto C. Frasch, Beata Fuchsova *Front Mol Neurosci*. 2018; 11: 314. Published online 2018 Sep 4. doi: 10.3389/fnmol.2018.00314 PMID: PMC6131581 Melisa C Monteleone, Ezequiela Adrover, María Eugenia Pallarés, Marta C Antonelli, Alberto C Frasch, Marcela A Brocco *Epigenetics*. 2014 Jan 1; 9(1): 152–160. Published online 2013 Aug 19. doi: 10.4161/epi.25925 PMID: PMC3928178A El-Kordi, A Kästner, S Grube, M Klugmann, M Begemann, S Sperlin

**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.

**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.

**GRIK1:** Association study of polymorphisms in the GluR5 kainate receptor gene (GRIK1) with schizophrenia. (PMID: 11702055) Shibata H . Fukumaki Y *Psychiatric genetics* 2001 3 4 23 45 58 A preliminary pharmacogenetic investigation of adverse events from topiramate in heavy drinkers. (PMID: 19331489) Ray LA . Monti PM *Experimental and clinical psychopharmacology* 2009 3 23 45 58 Allelic association of juvenile absence epilepsy with a GluR5 kainate receptor gene (GRIK1) polymorphism. (PMID: 9259378) San

**GRIK2:** <https://ghr.nlm.nih.gov/gene/GRIK2>

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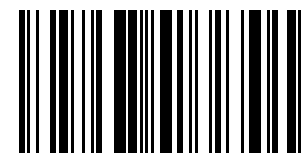
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Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**GRIK3:** Chromosomal localization of gene for human glutamate receptor subunit-7. (PMID: 8128318) Puranam RS . McNamara JO Somatic cell and molecular genetics 1993 2 3 4 23 56 Association between the ionotropic glutamate receptor kainate3 (GRIK3) Ser310Ala polymorphism and schizophrenia in the Indian population. (PMID: 19921975) Ahmad Y . Sinha S The world journal of biological psychiatry : the official journal of the World Federation of Societies of Biological Psychiatry 2009 3 23 43 56 An associat

**GRIN2A:** Vincent Strehlow, Henrike O Heyne, Danique R M Vlaskamp, Katie F M Marwick, Gabrielle Rudolf, Julitta de Bellescize, Saskia Biskup, Eva H Brilstra, Oebele F Brouwer, Petra M C Callenbach, Julia Hentschel, Edouard Hirsch, Peter C Kind, Cyril Mignot, Konrad Platzer, Patrick Rump, Paul A Skehel, David J A Wyllie, Giles E Hardingham, Conny M A van Ravenswaaij-Arts, Gaetan Lesca, Johannes R Lemke, GRIN2A study group Brain. 2019 Jan; 142(1): 80-92. Published online 2018 Dec 12.

**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

**GRM3:** Yi H, Geng L, Black A, Talmon G, Berim L, Wang J. The miR-487b-3p/GRM3/TGF $\beta$  signaling axis is an important regulator of colon cancer tumorigenesis. Oncogene. 2017;36(24):3477-3489. doi:10.1038/onc.2016.499.

**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.4511-17.2018

**GSDML:** Granell R, Henderson AJ, Timpson N, et al. Examination of the relationship between variation at 17q21 and childhood wheeze phenotypes. The Journal of allergy and clinical immunology. 2013;131(3):685-694. doi:10.1016/j.jaci.2012.09.021.

**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.

**GSK3B:** First evidence of genetic association between AKT2 and polycystic ovary syndrome. (PMID: 18768676) Goodarzi MO . Azziz R Diabetes care 2008 3 23 43 56 Glycogen synthase kinase-3beta and tau genes interact in Alzheimer's disease. (PMID: 18991351) Kwok JB . Schofield PR Annals of neurology 2008 3 23 43 56 No significant association between the genetic polymorphisms in the GSK-3 beta gene and schizophrenia in the Chinese population. (PMID: 17368486) Meng J . He L Journal of psychiatric research

**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.M116.118111

**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 HBB Gene 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.

Name: Sample

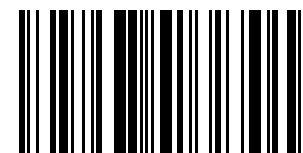
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Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**HCN1:** Wemhöner K, Kanyshkova T, Silbernagel N, et al. An N-terminal deletion variant of HCN1 in the epileptic WAG/Rij strain modulates HCN current densities. *Frontiers in Molecular Neuroscience*. 2015;8:63. doi:10.3389/fnmol.2015.00063.

**HCRTR2:** Fan Z, Hou L, Wan D, Ao R, Zhao D, Yu S. Genetic association of HCRTR2, ADH4 and CLOCK genes with cluster headache: a Chinese population-based case-control study. *The Journal of Headache and Pain*. 2018;19(1):1. doi:10.1186/s10194-017-0831-1.

**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 23 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 23 4 58 Involvement of histone deace

**HDAC9:** Smita Salian-Mehta, Mei Xu, Timothy A. McKinsey, Stuart Tobet, Margaret E. Wierman *J Biol Chem*. 2015 May 29; 290(22): 14045–14056. Published online 2015 Apr 14. doi: 10.1074/jbc.M115.640482 PMID: 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-Filho *Genome Biol*. 2015; 16(1): 107. Published online 2015 May 22. doi: 10.1186/s13059-

**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.

**HHAT:** Antonio D. Konitsiotis, Biljana Jovanovi?, Paulina Ciepla, Martin Spitaler, Thomas Lanyon-Hogg, Edward W. Tate, Anthony I. Magee *J Biol Chem*. 2015 Feb 6; 290(6): 3293–3307. Published online 2014 Dec 12. doi: 10.1074/jbc.M114.614578 PMID: PMC4319003 Antonios D. Konitsiotis, Shu-Chun Chang, Biljana Jovanovi?, Paulina Ciepla, Naoko Masumoto, Christopher P. Palmer, Edward W. Tate, John R. Couchman, Anthony I. Magee *PLoS One*. 2014; 9(3): e89899. Published online 2014 Mar 7.

**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

**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 23 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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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 Priefler, 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

**HMGA2:** Chung J, Zhang X, Collins B, et al. High mobility group A2 (HMGA2) deficiency in pigs leads to dwarfism, abnormal fetal resource allocation, and cryptorchidism. Proceedings of the National Academy of Sciences of the United States of America. 2018;115(21):

**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,

**HNMT:** Hubert G. Schwelberger, Johannes Feurle, Gunnar Houen Inflamm Res. 2017; 66(11): 1021–1029. Published online 2017 Aug 8. doi: 10.1007/s00011-017-1086-7 PMID: PMC5633628 Abolfazl Heidari, Chanakan Tongsook, Reza Najafipour, Luciana Musante, Nasim Vasli, Masoud Garshasbi, Hao Hu, Kirti Mittal, Amy J. M. McNaughton, Kumudesh Sritharan, Melissa Hudson, Henning Stehr, Saeid Talebi, Mohammad Moradi, Hossein Darvish, Muhammad Arshad Rafiq, Hossein Mozhdehipanah, Ali Rashidinejad, Shahram Samiei, Moh

**HS3ST4:** Kylee L. Spencer, Lana M. Olson, Nathalie Schnetz-Boutaud, Paul Gallins, Gaofeng Wang, William K. Scott, Anita Agarwal, Johanna Jakobsdottir, Yvette Conley, Daniel E. Weeks, Michael B. Gorin, Margaret A. Pericak-Vance, Jonathan L. Haines Invest Ophthalmol Vis Sci. 2011 Mar; 52(3): 1748–1754. Published online 2011 Mar 28. doi: 10.1167/iovs.09-5112 PMID: PMC3101690 Charles Hellec, Maxime Delos, Mathieu Carpentier, Agnès Denys, Fabrice Allain PLoS One. 2018; 13(3): e0194676. Published online 20

**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

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**HTR1A:** 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 21 39 Lack of association between five serotonin metabolism-related genes and medication overuse headache. (PMID: 19936617) Cevoli S ... Cortelli P The journal of headache and pain 2010 3 21 39 Panic disorder is associated with the serotonin transporter gene (SLC6A4) but not the promoter region (5-HTTLPR). (PMID: 18663369) Strug LJ ... Weissman MM Molecular psychiatry 2010 3 21 39 No interactions between genetic polymorphisms and stressful life events on outcome of antidepressant treatment. (PMID: 20022223) Bukh JD ... Kessing LV European neuropsychopharmacology : the journal of the European College of Neuropsychopharmacology 2010 3 21 39 Risk-taking behavior in a gambling task associated with variations in the tryptophan hydroxylase 2 gene: relevance to psychiatric disorders. (PMID: 20043001) Juhasz G ... Anderson IM Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology 2010 Response to fluoxetine and serotonin 1A receptor (C-1019G) polymorphism in Taiwan Chinese major depressive disorder. (PMID: 16302021) Hong CJ ... Tsai SJ The pharmacogenomics journal 2006 3 21 39 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 Does human serotonin-1A receptor polymorphism (rs6295) code for pain and associated symptoms in fibromyalgia syndrome? (PMID: 33874644) Tanwar S ... Bhatia R Reumatismo 2021 3 Associations and interactions of the serotonin receptor genes 5-HT1A, 5-HT2A, and childhood trauma with alexithymia in two independent general-population samples. (PMID: 33567384) Terock J ... Grabe HJ Psychiatry research 2021 3 Membrane cholesterol regulates endocytosis and trafficking of the serotonin1A receptor: Insights from acute cholesterol depletion. (PMID: 33429076) Kumar GA ... Chattopadhyay A Biochimica et biophysica acta. Molecular and cell biology of lipids 2021

**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.

**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:

**HTR2B:** Agonist-directed trafficking of signalling at serotonin 5-HT2A, 5-HT2B and 5-HT2C-VSV receptors mediated Gq/11 activation and calcium mobilisation in CHO cells. (PMID: 18703043) Cussac D ... Raully-Lestienne I European journal of pharmacology 2008 3 4 21 24 Agonist actions of dihydroergotamine at 5-HT2B and 5-HT2C receptors and their possible relevance to antimigraine efficacy. (PMID: 12970106) Schaerlinger B ... Maroteaux L British journal of pharmacology 2003 3 4 21 24 5-HT2B receptor-mediated calcium release from ryanodine-sensitive intracellular stores in human pulmonary artery endothelial cells. (PMID: 8882600) Ullmer C ... Lübbert H British journal of pharmacology 1996 3 4 21 Cloning and functional characterization of the human 5-HT2B serotonin receptor. (PMID: 8143856) Schmuck K ... Lübbert H FEBS letters 1994 2 3 4 The human serotonin 5-HT2B receptor: pharmacological link between 5-HT2 and 5-HT1D receptors. (PMID: 7926008) Choi DS ... Maroteaux L FEBS letters 1994

**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

**HTR3C:** Gharahkhani P, Fitzgerald RC, Vaughan TL, et al. Genome-wide association studies in oesophageal adenocarcinoma and Barrett's oesophagus: a large-scale meta-analysis. The Lancet Oncology. 2016;17(10):1363-1373. doi:10.1016/S1470-2045(16)30240-6.

**HTT:** Liu X, Wang C-E, Hong Y, et al. N-terminal Huntingtin Knock-In Mice: Implications of Removing the N-terminal Region of Huntingtin for Therapy. Merry D, ed. PLoS Genetics. 2016;12(5):e1006083. doi:10.1371/journal.pgen.1006083.

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**IDS:** Multiple cryptic splice sites can be activated by IDS point mutations generating misspliced transcripts. (PMID: 16699754) Lualdi S . Filocamo M Journal of molecular medicine (Berlin, Germany) 2006 3 4 23 58 Mutational spectrum of the iduronate 2 sulfatase gene in 25 unrelated Korean Hunter syndrome patients: identification of 13 novel mutations. (PMID: 12655569) Kim CH . Jin DK Human mutation 2003 3 4 23 58 The effect of four mutations on the expression of iduronate-2-sulfatase in mucopolys

**IFI16:** Iqbal J, Ansari MA, Kumar B, et al. Histone H2B-IFI16 Recognition of Nuclear Herpesviral Genome Induces Cytoplasmic Interferon- $\gamma$  Responses. Moses AV, ed. PLoS Pathogens. 2016;12(10):e1005967. doi:10.1371/journal.ppat.1005967.

**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.

**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.

**IKBKE:** Rajurkar M, Dang K, Fernandez-Barrena MG, et al. IKBKE is required during KRAS-induced pancreatic tumorigenesis. Cancer research. 2017;77(2):320-329. doi:10.1158/0008-5472.CAN-15-1684.

**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-10RB:** Lin Z, Wang Z, Hegarty JP, et al. Genetic association and epistatic interaction of the interleukin-10 signaling pathway in pediatric inflammatory bowel disease. World Journal of Gastroenterology. 2017;23(27):4897-4909. doi:10.3748/wjg.v23.i27.4897.

**IL-15RA:** Guo Q, Lv S-Z, Wu S-W, Tian X, Li Z-Y. Association between single nucleotide polymorphism of IL15RA gene with susceptibility to ossification of the posterior longitudinal ligament of the spine. Journal of Orthopaedic Surgery and Research. 2014;9:103. doi:

**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 $\gamma$  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-3RA:** Chiu C-Y, Su S-C, Fan W-L, et al. Whole-Genome Sequencing of a Family with Hereditary Pulmonary Alveolar Proteinosis Identifies a Rare Structural Variant Involving CSF2RA/CRLF2/IL3RA Gene Disruption. Scientific Reports. 2017;7:43469. doi:10.1038/srep43469

**IL-6:** Huang Q, Zhang Z, Liao Y, et al. 17 $\beta$ -estradiol upregulates IL6 expression through the ER $\alpha$  pathway to promote lung adenocarcinoma progression. Journal of Experimental & Clinical Cancer Research?: CR. 2018;37:133. doi:10.1186/s13046-018-0804-5.

**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

**INSR:** Yin Y, Hua H, Li M, et al. mTORC2 promotes type I insulin-like growth factor receptor and insulin receptor activation through the tyrosine kinase activity of mTOR. Cell Research. 2016;26(1):46-65. doi:10.1038/cr.2015.133.

Name: Sample

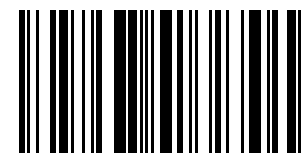
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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.

**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.

**ITGA4:** Genbacev O, Larocque N, Ona K, et al. Integrin  $\alpha$ 4-positive human trophoblast progenitors: functional characterization and transcriptional regulation. *Human Reproduction (Oxford, England)*. 2016;31(6):1300-1314. doi:10.1093/humrep/dew077.

**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

**ITIH3:** Wickramasekara RN, Morrill S, Farhat Y, Smith SJ, Yilmazer-Hanke D. Glutathione and Inter- $\alpha$ -trypsin inhibitor heavy chain 3 (Itih3) mRNA levels in nicotine-treated Cd44 knockout mice. *Toxicology Reports*. 2018;5:759-764. doi:10.1016/j.toxrep.2018.06.010.

**ITPR1:** Hsiao C-T, Liu Y-T, Liao Y-C, Hsu T-Y, Lee Y-C, Soong B-W. Mutational analysis of ITPR1 in a Taiwanese cohort with cerebellar ataxias. Palau F, ed. *PLoS ONE*. 2017;12(11):e0187503. doi:10.1371/journal.pone.0187503.

**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.

**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

**KATNAL2:** A novel family of katanin-like 2 protein isoforms (KATNAL2), interacting with nucleotide-binding proteins Nubp1 and Nubp2, are key regulators of different MT-based processes in mammalian cells. (PMID: 26153462) Ververis A. Santama N Cellular and molecular life sciences : CMLS 2016 2 3 58 Proteomic Analysis of the Mammalian Katanin Family of Microtubule-severing Enzymes Defines Katanin p80 subunit B-like 1 (KATNBL1) as a Regulator of Mammalian Katanin Microtubule-severing. (PMID: 26929214)

**KAZN:** Pstr<sup>g</sup> N, Ziemnicka K, Bluysen H, Weso<sup>y</sup>J. Thyroid cancers of follicular origin in a genomic light: in-depth overview of common and unique molecular marker candidates. *Molecular Cancer*. 2018;17:116. doi:10.1186/s12943-018-0866-1.

**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.

**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.

Name: Sample

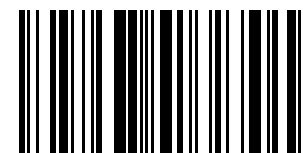
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**KCNQ3:** Heun Soh, Rima Pant, Joseph J. LoTurco, Anastasios V. Tzingounis *J Neurosci.* 2014 Apr 9; 34(15): 5311–5321. doi: 10.1523/JNEUROSCI.3919-13.2014 PMID: PMC3983807 Frank S. Choveau, Jie Zhang, Sonya M. Bierbower, Ramaswamy Sharma, Mark S. Shapiro *PLoS One.* 2015; 10(12): e0145367. Published online 2015 Dec 21. doi: 10.1371/journal.pone.0145367 PMID: PMC4687061 Frank S. Choveau, Ciria C. Hernandez, Sonya M. Bierbower, Mark S. Shapiro *Biophys J.* 2012 Jun 6; 102(11): 2489–2498. doi: 10.1016/j.bpj.20

**KCTD8:** Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T . Sugano S *Nature genetics* 2004 3 4 56 Architecture of the human interactome defines protein communities and disease networks. (PMID: 28514442) Huttlin EL . Harper JW *Nature* 2017 3 56 Genome-wide association study of d-amphetamine response in healthy volunteers identifies putative associations, including cadherin 13 (CDH13). (PMID: 22952603) Hart AB . Palmer AA *PLoS one* 2012 3 56 Quantitative

**KDM4C:** Zhao E, Ding J, Xia Y, et al. KDM4C and ATF4 Cooperate in Transcriptional Control of Amino Acid Metabolism. *Cell reports.* 2016;14(3):506-519. doi:10.1016/j.celrep.2015.12.053.

**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 Arthrogyrosis. *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 Geary; 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.

**KIF21B:** Characterization of cDNA clones in size-fractionated cDNA libraries from human brain. (PMID: 9455484) Seki N . Ohara O *DNA research : an international journal for rapid publication of reports on genes and genomes* 1997 2 3 4 58 Interaction between ERAP1 and HLA-B27 in ankylosing spondylitis implicates peptide handling in the mechanism for HLA-B27 in disease susceptibility. (PMID: 21743469) Evans DM . Wellcome Trust Case Control Consortium 2 (WTCCC2) *Nature genetics* 2011 3 45 58 Replication o

**KIF26B:** Susman MW, Karuna EP, Kunz RC, et al. Kinesin superfamily protein Kif26b links Wnt5a-Ror signaling to the control of cell and tissue behaviors in vertebrates. *Nathans J, ed. eLife.* 2017;6:e26509. doi:10.7554/eLife.26509.

#### KIF5C:

**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.

**KLF6:** Zhang Y, Lei C-Q, Hu Y-H, et al. Krüppel-like Factor 6 Is a Co-activator of NF- $\kappa$ 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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**KLFB7:** 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. Schuettpelz, 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

**KMT2A:**

**L3MBTL4:** Liu X, Hu C, Bao M, et al. Genome Wide Association Study Identifies L3MBTL4 as a Novel Susceptibility Gene for Hypertension. *Scientific Reports.* 2016;6:30811. doi:10.1038/srep30811.

**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.

**LDLRAD3:** Cui X, Wang J, Guo Z, et al. Emerging function and potential diagnostic value of circular RNAs in cancer. *Molecular Cancer.* 2018;17:123. doi:10.1186/s12943-018-0877-y.

**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.

**LHX3:** Differential activation of pituitary hormone genes by human Lhx3 isoforms with distinct DNA binding properties. (PMID: 10598593) Sloop KW . Rhodes SJ *Molecular endocrinology (Baltimore, Md.)* 1999 2 3 4 23 56 Four novel mutations of the LHX3 gene cause combined pituitary hormone deficiencies with or without limited neck rotation. (PMID: 17327381) Pfaeffle RW . Rhodes SJ *The Journal of clinical endocrinology and metabolism* 2007 3 4 23 56 Serine/threonine/tyrosine phosphorylation of the LHX3 L

**LIMCH1:** Prediction of the coding sequences of unidentified human genes. XIV. The complete sequences of 100 new cDNA clones from brain which code for large proteins in vitro. (PMID: 10470851) Kikuno R . Ohara O *DNA research : an international journal for rapid publication of reports on genes and genomes* 1999 2 3 4 56 LIMCH1 regulates nonmuscle myosin-II activity and suppresses cell migration. (PMID: 28228547) Lin YH . Pai LM *Molecular biology of the cell* 2017 3 4 56 Personalized smoking cessation: i



**LINC00461:** Yali Yang, Mingxin Ren, Chao Song, Dan Li, Shahid Hussain Soomro, Yajie Xiong, Hongfeng Zhang, Hui FuOncotarget. 2017 Oct 13; 8(48): 84123–84139. Published online 2017 Aug 18. doi: 10.18632/oncotarget.20340PMCID: PMC5663582Naijun Yuan, Guijuan Zhang, Fengjie Bie, Min Ma, Yi Ma, Xuefeng Jiang, Yurong Wang, Xiaoqian HaoOnco Targets Ther. 2017; 10: 5883–5897. Published online 2017 Dec 12. doi: 10.2147/OTT.S149308PMCID: PMC5731337Qiaowei Fan, Bingrong LiuOnco Targets Ther. 2018; 11: 2453–2466.

**LINC00609:** 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

**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.

**LINC01239:**

**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

**LINC01512:** Long noncoding RNA expression profiles of lung adenocarcinoma ascertained by microarray analysis. (PMID: 25089627) Xu G ... Wang Y PloS one 2014 2 3 70 LncRNA LINC01512 Promotes the Progression and Enhances Oncogenic Ability of Lung Adenocarcinoma. (PMID: 28569418) Chen J ... Wang Y Journal of cellular biochemistry 2017 3 70 Human  $\beta$  cell transcriptome analysis uncovers lncRNAs that are tissue-specific, dynamically regulated, and abnormally expressed in type 2 diabetes. (PMID: 23040067) Morán I ... Ferrer J Cell metabolism 2012 2 3 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 3 Identification of cis- and trans-acting genetic variants explaining up to half the variation in circulating vascular endothelial growth factor levels. (PMID: 21757650) Debette S ... Seshadri S Circulation research 2011 3 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T ... Sugano S Nature genetics 2004

**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

**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.

**LOC101928278:** uLOC101928278 (Uncharacterized LOC101928278) is an RNA Gene, and is affiliated with the ncRNA class.

**LOC105371356:** LOC105371356 (Uncharacterized LOC105371356) is an RNA Gene, and is affiliated with the ncRNA class.

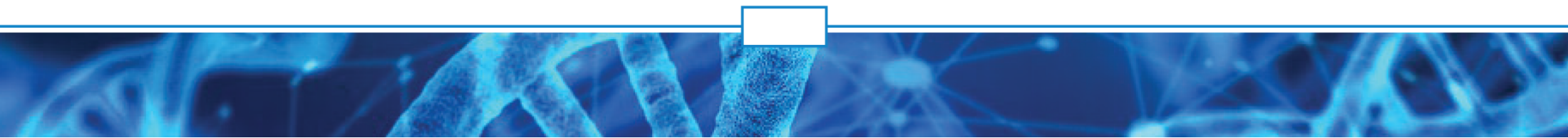
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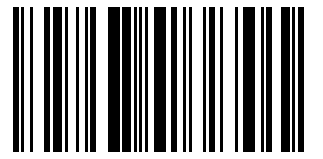
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**LOC107986598:** LOC107986598 (Uncharacterized LOC107986598) is an RNA Gene, and is affiliated with the ncRNA class.

**LOC107987043:**

**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.

**LPCAT2:** Quantitative Proteomics Links the LRRC59 Interactome to mRNA Translation on the ER Membrane. (PMID: 32788342) Hannigan MM ... Nicchitta CV Molecular & cellular proteomics : MCP 2020 3 Lysophosphatidylcholine acyltransferase 2 (LPCAT2) co-localises with TLR4 and regulates macrophage inflammatory gene expression in response to LPS. (PMID: 32587324) Abate W ... Jackson SK Scientific reports 2020 Enzymatic activity of the human 1-acylglycerol-3-phosphate-O-acyltransferase isoform 11: upregulated in breast and cervical cancers. (PMID: 20363836) Agarwal AK ... Garg A Journal of lipid research 2010 2 3 4 A single enzyme catalyzes both platelet-activating factor production and membrane biogenesis of inflammatory cells. Cloning and characterization of acetyl-CoA:LYSO-PAF acetyltransferase. (PMID: 17182612) Shindou H ... Shimizu T The Journal of biological chemistry 2007 2 3 4 Human lysophosphatidylcholine acyltransferases 1 and 2 are located in lipid droplets where they catalyze the formation of phosphatidylcholine. (PMID: 21498505) Moessinger C ... Thiele C The Journal of biological chemistry 2011 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 3 39 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE ... Uhl GR Molecular medicine (Cambridge, Mass.) 2010

**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.

**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.

**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.

**LSM1:** Chowdhury A, Kalurupalle S, Tharun S. Mutagenic Analysis of the C-Terminal Extension of Lsm1. Wilusz CJ, ed. PLoS ONE. 2016;11(7):e0158876. doi:10.1371/journal.pone.0158876.

**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-

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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.

**MAD1L1:** Trost S, Diekhof EK, Mohr H, et al. Investigating the Impact of a Genome-Wide Supported Bipolar Risk Variant of MAD1L1 on the Human Reward System. *Neuropsychopharmacology*. 2016;41(11):2679-2687. doi:10.1038/npp.2016.70.

**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.

**MAGI1:** Jia S, Lu J, Qu T, et al. MAGI1 inhibits migration and invasion via blocking MAPK/ERK signaling pathway in gastric cancer. *Chinese Journal of Cancer Research*. 2017;29(1):25-35. doi:10.21147/j.issn.1000-9604.2017.01.04.

**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 *Uppsala 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. Baskin *Oncotarget*. 2016 Jan 19; 7(3): 3379–3393. Published online 2015 Dec 12. doi: 10.18632/oncotarget.6582 PMID: PMC4823113 Bo-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 Lee *J Physiol*. 2014 Nov 15; 592(Pt 22): 4951–4968. Published online 2014 Oct 21. doi: 10.1113/jphysiol.2014.278754 PMID: PMC4259537 Shang-Yi A. Tsai,

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**MAP2K1:** Spectrum of MEK1 and MEK2 gene mutations in cardio-facio-cutaneous syndrome and genotype-phenotype correlations. (PMID: 19156172) Dentici ML ... Dallapiccola B European journal of human genetics : EJHG 2009 3 22 40 71 Mutation and phenotypic spectrum in patients with cardio-facio-cutaneous and Costello syndrome. (PMID: 18042262) Schulz AL ... Zenker M Clinical genetics 2008 3 4 22 71 Germline mutations in genes within the MAPK pathway cause cardio-facio-cutaneous syndrome. (PMID: 16439621) Rodriguez-Viciano P ... Rauen KA Science (New York, N.Y.) 2006 3 4 22 71 Cloning and characterization of two distinct human extracellular signal-regulated kinase activator kinases, MEK1 and MEK2. (PMID: 8388392) Zheng CF ... Guan KL The Journal of biological chemistry 1993 2 3 4 22 Somatic activating mutations in MAP2K1 cause melorheostosis. (PMID: 29643386) Kang H ... Bhattacharyya T Nature communications 2018

**MAP2K5:** Kang S-G, Lee YJ, Park Y-M, Kim L, Lee H-J. Haplotype Association of the MAP2K5 Gene with Antipsychotics-Induced Symptoms of Restless Legs Syndrome among Patients with Schizophrenia. Psychiatry Investigation. 2018;15(1):84-89. doi:10.4306/pi.2018.15.1.84.

**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.

**MAPKAP1:** Zhu X, Zhang J, Fan W, et al. MAPKAP1 rs10118570 Polymorphism Is Associated with Anti-Infection and Anti-Hepatic Fibrogenesis in Schistosomiasis Japonica. Pantopoulos K, ed. PLoS ONE. 2014;9(8):e105995. doi:10.1371/journal.pone.0105995.

**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

**MARCH4:** Samji T, Hong S, Means RE. The Membrane Associated RING-CH Proteins: A Family of E3 Ligases with Diverse Roles through the Cell. International Scholarly Research Notices. 2014;2014:637295. doi:10.1155/2014/637295.

**MARK1:** Emptage RP, Lemmon MA, Ferguson KM. Molecular determinants of KA1 domain-mediated autoinhibition and phospholipid activation of MARK1 kinase. The Biochemical journal. 2017;474(3):385-398. doi:10.1042/BCJ20160792.

**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 Liu J Biol Chem. 2014 Nov 21; 289(47): 32639-32655. Published online 2014 Sep 30. doi: 10.1074/jbc.M114.589689 PMID: PMC4239617 Heping 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/JCI63861 PMID: PMC3533284 Komal 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.

**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 PMID: PMC6308034 Faith K. McDaniel, Brent M. Molden, Sameer Mohammad, Giovanna Baldini, Lakisha McPike, Paola Narducci, Susana Granell, Giulia Baldini J Biol Chem. 2012 Jun 22; 287(26): 21873-21890. Published online 2012 Apr 27. doi: 10.1074/jbc.M112.346890 PMID: 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- $\kappa$ B signaling by targeting MAVS complex. Scientific Reports. 2016;6:33557. doi:10.1038/srep33557.

**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.

Name: Sample

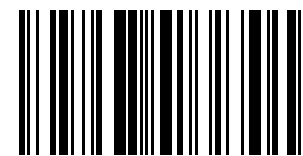
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Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**MDFIC:** Robert H. Oakley, John M. Busillo, John A. Cidlowickij Biol Chem. 2017 Apr 7; 292(14): 5825–5844. Published online 2017 Feb 21. doi: 10.1074/jbc.M116.758888PMCID: PMC5392576 Faizan H. Khan, Vijayabaskar Pandian, Satishkumar Ramraj, Mohan Natarajan, Sheeja Aravindan, Terence S. Herman, Natarajan AravindanBMC Cancer. 2015; 15: 514. Published online 2015 Jul 10. doi: 10.1186/s12885-015-1463-yPMCID: PMC4496850Haiqing 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.

**ME2:** Kambhampati S, Rajewski RA, Tanol M, et al. A Second Generation 2-Methoxyestradiol Prodrug Is Effective Against Barrett's Adenocarcinoma in a Mouse Xenograft Model. Molecular cancer therapeutics. 2013;12(3):255-263. doi:10.1158/1535-7163.MCT-12-0777.

**MEF2C:** Harrington AJ, Raissi A, Rajkovich K, et al. MEF2C regulates cortical inhibitory and excitatory synapses and behaviors relevant to neurodevelopmental disorders. Rosenmund C, ed. eLife. 2016;5:e20059. doi:10.7554/eLife.20059.

**MEF2D:** Andzelm MM, Cherry TJ, Harmin DA, et al. MEF2D drives photoreceptor development through a genome-wide competition for tissue-specific enhancers. Neuron. 2015;86(1):247-263. doi:10.1016/j.neuron.2015.02.038.

**MEFV:** <https://www.genecards.org/cgi-bin/carddisp.pl?gene=MEFV>

**MEGF10:** Ray TA, Roy S, Kozlowski C, et al. Formation of retinal direction-selective circuitry initiated by starburst amacrine cell homotypic contact. Nathans J, ed. eLife. 2018;7:e34241. doi:10.7554/eLife.34241.

**MEIS1:** Wang H, Liu C, Liu X, et al. MEIS1 Regulates Hemogenic Endothelial Generation, Megakaryopoiesis, and Thrombopoiesis in Human Pluripotent Stem Cells by Targeting TAL1 and FLI1. Stem Cell Reports. 2018;10(2):447-460. doi:10.1016/j.stemcr.2017.12.017.

**MET:** Adachi E, Sakai K, Nishiuchi T, Imamura R, Sato H, Matsumoto K. Different growth and metastatic phenotypes associated with a cell-intrinsic change of Met in metastatic melanoma. Oncotarget. 2016;7(43):70779-70793. doi:10.18632/oncotarget.12221.

#### MIR137HG:

**MIR146A:** The role of microRNA-146a (miR-146a) and its target IL-1R-associated kinase (IRAK1) in psoriatic arthritis susceptibility. (PMID: 20500689) Chatzikiyriakidou A ... Drosos AA Scandinavian journal of immunology 2010 3 70 Evaluation of SNPs in miR-146a, miR196a2 and miR-499 as low-penetrance alleles in German and Italian familial breast cancer cases. (PMID: 19847796) Catucci I ... Peterlongo P Human mutation 2010 3 39 Common genetic variants in pre-microRNAs are associated with risk of coal workers' pneumoconiosis. (PMID: 19881472) Wang M ... Ni C Journal of human genetics 2010 3 39 A functional polymorphism in Pre-miR-146a gene is associated with prostate cancer risk and mature miR-146a expression in vivo. (PMID: 19902466) Xu B ... Wu HF The Prostate 2010 3 39 Characterization of an NF-kappaB-regulated, miRNA-146a-mediated down-regulation of complement factor H (CFH) in metal-sulfate-stressed human brain cells. (PMID: 19540598) Pogue AI ... Lukiw WJ Journal of inorganic biochemistry 2009 Long non-coding RNA MALAT1 modulate cell migration, proliferation and apoptosis by sponging microRNA-146a to regulate CXCR4 expression in acute myeloid leukemia. (PMID: 33382018) Sheng XF ... Zhuang HF Hematology (Amsterdam, Netherlands) 2021 3 miR146a up-regulation is involved in small HA oligosaccharides-induced pro-inflammatory response in human chondrocytes. (PMID: 32931869) Avenoso A ... Campo GM Biochimica et biophysica acta. General subjects 2021 3 Downregulation of microRNA-146a in diabetes, obesity and hypertension may contribute to severe COVID-19. (PMID: 33338955) Roganović J Medical hypotheses 2021 3 SLE non-coding genetic risk variant determines the epigenetic dysfunction of an immune cell specific enhancer that controls disease-critical microRNA expression. (PMID: 33420081) Hou G ... Shen N Nature communications 2021 3 Hepatitis A virus-induced hsa-miR-146a-5p attenuates IFN-β signaling by targeting adaptor protein TRAF6. (PMID: 33459883) Mo L ... Hu Y Archives of virology 2021

**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

Name: Sample

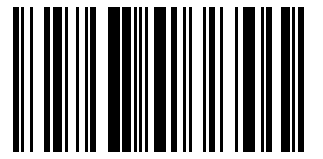
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**MMP16:** Shen Z, Wang X, Yu X, Zhang Y, Qin L. MMP16 promotes tumor metastasis and indicates poor prognosis in hepatocellular carcinoma. *Oncotarget*. 2017;8(42):72197-72204. doi:10.18632/oncotarget.20060.

**MMP17:** Blanco MJ, Rodríguez-Martín I, Learte AIR, et al. Developmental expression of membrane type 4-matrix metalloproteinase (Mt4-mmp/Mmp17) in the mouse embryo. Schubert M, ed. *PLoS ONE*. 2017;12(9):e0184767. doi:10.1371/journal.pone.0184767.

**MOG:** S. Jarius, F. Paul, O. Aktas, N. Asgari, R. C. Dale, J. de Seze, D. Franciotta, K. Fujihara, A. Jacob, H. J. Kim, I. Kleiter, T. Kümpfel, M. Levy, J. Palace, K. Ruprecht, A. Saiz, C. Trebst, B. G. Weinshenker, B. Wildemann *J Neuroinflammation*. 2018; 15: 134. Published online 2018 May 3. doi: 10.1186/s12974-018-1144-2PMCID: PMC5932838 Sven Jarius, Klemens Ruprecht, Ingo Kleiter, Nadja Borisow, Nasrin Asgari, Kalliopi Pitarokoili, Florence Pache, Oliver Stich, Lena-Alexandra Beume, Martin W. Hü

**MPC2:** Nagampalli RSK, Quesñay JEN, Adamoski D, et al. Human mitochondrial pyruvate carrier 2 as an autonomous membrane transporter. *Scientific Reports*. 2018;8:3510. doi:10.1038/s41598-018-21740-z.

**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.

**MPP6:**

**MRM2:**

**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.

**MRVI1:** Santoro C, Giugliano T, Kraemer M, et al. Whole exome sequencing identifies MRVI1 as a susceptibility gene for moyamoya syndrome in neurofibromatosis type 1. Bandapalli OR, ed. *PLoS ONE*. 2018;13(7):e0200446. doi:10.1371/journal.pone.0200446.

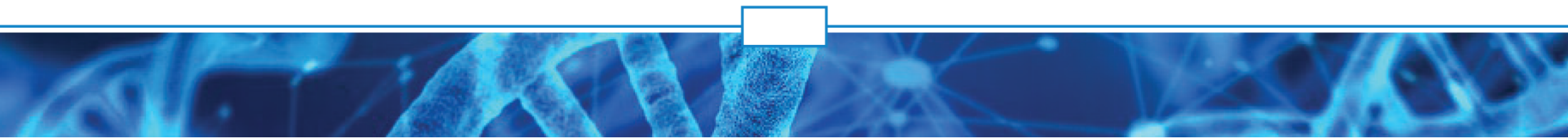
**MS4A2:** Heinrich F, Lehmbecker A, Raddatz BB, et al. Morphologic, phenotypic, and transcriptomic characterization of classically and alternatively activated canine blood-derived macrophages in vitro. Olszewski MA, ed. *PLoS ONE*. 2017;12(8):e0183572. doi:10.1371/jo

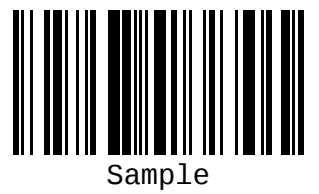
**MS4A6A:** Lacher SE, Alazizi A, Wang X, et al. A hypermorphic antioxidant response element is associated with increased MS4A6A expression and Alzheimer's disease. *Redox Biology*. 2018;14:686-693. doi:10.1016/j.redox.2017.10.018. Alzheimer's disease susceptibility variants in the MS4A6A gene are associated 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

**MTCO3P1:**





**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.

**MTFMT:** As mutações no MTFMT estão na base de um distúrbio humano de formilação que causa uma tradução mitocondrial comprometida. (PMID: 21907147) Tucker EJ. Mootha VK Metabolismo celular 2011 3 4 58 Variantes genéticas em genes mitocondriais codificados nucleares influenciam a progressão da AIDS. (PMID: 20877624) Hendrickson SL. O'Brien SJ PloS um 2010 3 45 58 Sequenciamento completo e caracterização de 21.243 cDNAs humanos inteiros. (PMID: 14702039) Ota T. Sugano S Nature genetics 2004 3 4 58 O s

**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

**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

**MTMR9:** Liying Guo, Craig Martens, Daniel Bruno, Stephen F. Porcella, Hidehiro Yamane, Stephane M. Caucheteux, Jinfang Zhu, William E. Paul Proc Natl Acad Sci U S A. 2013 May 14; 110(20): E1849–E1856. Published online 2013 Apr 29. doi: 10.1073/pnas.1305070110 PMID: PMC3657794 Masashi Maekawa, Shimpei Terasaka, Yasuhiro Mochizuki, Katsuhisa Kawai, Yuka Ikeda, Nobukazu Araki, Edward Y. Skolnik, Tomohiko Taguchi, Hiroyuki Arai Proc Natl Acad Sci U S A. 2014 Mar 18; 111(11): E978–E987. Published online 20

**MTNR1A:** Lack of association between the promoter polymorphism of the MTNR1A gene and adolescent idiopathic scoliosis. (PMID: 18794763) Qiu XS . Qiu Y Spine 2008 3 23 43 56 Allelic variants of human melatonin 1A receptor in patients with familial adolescent idiopathic scoliosis. (PMID: 12973153) Morcuende JA . Sheffield V Spine 2003 3 23 43 56 Alleic variants of human melatonin 1a receptor: function and prevalence in subjects with circadian rhythm sleep disorders. (PMID: 10471411) Ebisawa T . Yamauc

**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

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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.

**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.

**MTUS2:** TIP150 interacts with and targets MCAK at the microtubule plus ends. (PMID: 19543227) Jiang K . Yao X EMBO reports 2009 2 3 4 58 An ATIPical family of angiotensin II AT2 receptor-interacting proteins. (PMID: 20889352) Rodrigues-Ferreira S . Nahmias C Trends in endocrinology and metabolism: TEM 2010 2 3 58 Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. (PMID: 20379614) Rose JE . Uhl GR Molecular medicine (Cambridge, Mass.) 2010

**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.

**NALCN-AS1:** Cochet-Bissuel M, Lory P, Monteil A. The sodium leak channel, NALCN, in health and disease. Frontiers in Cellular Neuroscience. 2014;8:132. doi:10.3389/fncel.2014.00132.

**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.

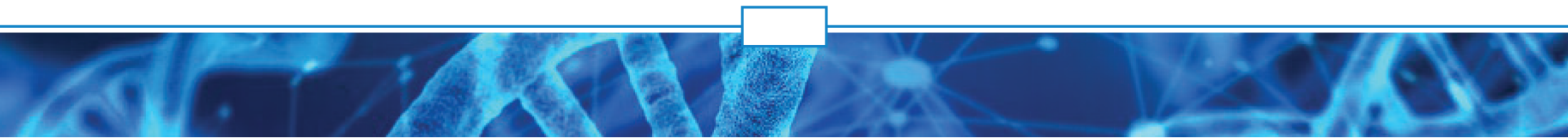
**NCOA3:** Li Y, Li L, Chen M, et al. MAD2L2 inhibits colorectal cancer growth by promoting NCOA3 ubiquitination and degradation. Molecular Oncology. 2018;12(3):391-405. doi:10.1002/1878-0261.12173.

**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

**NDUFS4:** Demonstration of a new pathogenic mutation in human complex I deficiency: a 5-bp duplication in the nuclear gene encoding the 18-kD (AQDQ) subunit. (PMID: 9463323) van den Heuvel L . Smeitink J American journal of human genetics 1998 2 3 4 23 58 NDUFS4 mutations cause Leigh syndrome with predominant brainstem involvement. (PMID: 19364667) Leshinsky-Silver E . Lerman-Sagie T Molecular genetics and metabolism 2009 3 4 23 58 Genotyping microsatellite DNA markers at putative disease loci in inb

**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 proteínasomal Degradation. The Journal of Biological Chemistry. 2013;288(12):8289-8298. doi:10.1074/jbc.M112.433185.

**NEURL1:**



Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**NFATC4:** Ulrich JD, Kim M-S, Houlihan PR, et al. Distinct Activation Properties of the Nuclear Factor of Activated T-cells (NFAT) Isoforms NFATc3 and NFATc4 in Neurons. *The Journal of Biological Chemistry*. 2012;287(45):37594-37609. doi:10.1074/jbc.M112.365197.

**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.

**NFIA:** Chromosomal localization of the four genes (NFIA, B, C, and X) for the human transcription factor nuclear factor I by FISH. (PMID: 7590749) Qian F ... Sippel AE *Genomics* 1995 2 3 4 21 Truncating mutation in NFIA causes brain malformation and urinary tract defects. (PMID: 27081522) Negishi Y ... Saitoh S *Human genome variation* 2015 3 4 70 An intragenic deletion of the NFIA gene in a patient with a hypoplastic corpus callosum, craniofacial abnormalities and urinary tract defects. (PMID: 24462883) Rao A ... Goel H *European journal of medical genetics* 2014 3 4 70 Familial craniosynostosis associated with a microdeletion involving the NFIA gene. (PMID: 25714559) Nyboe D ... Hove HB *Clinical dysmorphology* 2015 3 70 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 The evolution of the 9aaTAD domain in Sp2 proteins: inactivation with valines and intron reservoirs. (PMID: 31375868) Piskacek M ... Keegan LP *Cellular and molecular life sciences : CMLS* 2020 4 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA *Nature* 2020 3 Transcription factors NFIA and NFIB induce cellular differentiation in high-grade astrocytoma. (PMID: 31760595) Chen KS ... Bunt J *Journal of neuro-oncology* 2020

**NFIA-AS2:** Ahmetov I, Kulemin N, Popov D, et al. Genome-wide association study identifies three novel genetic markers associated with elite endurance performance. *Biology of Sport*. 2015;32(1):3-9. doi:10.5604/20831862.1124568.

**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

**NGFR:** SNPs in neurotrophin system genes and Alzheimer's disease in an Italian population. (PMID: 18780967) Cozza A ... Pellegrini S *Journal of Alzheimer's disease : JAD* 2008 3 23 41 Neurotrophic factor-related gene polymorphisms and adult attention deficit hyperactivity disorder (ADHD) score in a high-risk male population. (PMID: 18428117) Conner AC ... Thome J *American journal of medical genetics. Part B, Neuropsychiatric genetics : the official publication of the International Society of Psychiatric Genetics* 2008 3 23 41 Functional interaction of Fas-associated phosphatase-1 (FAP-1) with p75(NTR) and their effect on NF-kappaB activation. (PMID: 10544233) Irie S ... Sato TA *FEBS letters* 1999 3 4 23 TRAF family proteins interact with the common neurotrophin receptor and modulate apoptosis induction. (PMID: 10514511) Ye X ... Bredesen DE *The Journal of biological chemistry* 1999 3 4 23 Expression and structure of the human NGF receptor. (PMID: 3022937) Johnson D ... Chao M *Cell* 1986

**NIPSNAP3B:** Olga Y. Gorlova, Yafang Li, Ivan Gorlov, Jun Ying, Wei V. Chen, Shervin Assassi, John D. Reveille, 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.

**NLRC5:** Sayuri Yoshihama, Jason Roszik, Isaac Downs, Torsten B. Meissner, Saptha Vijayan, Bjoern Chapuy, Tabasum Sidiq, Margaret A. Shipp, Gregory A. Lizee, Koichi S. Kobayashi *Proc Natl Acad Sci U S A*. 2016 May 24; 113(21): 5999–6004. Published online 2016 May 9. doi: 10.1073/pnas.1602069113 PMCID: PMC4889388 Qingcai Meng, Chunmei Cai, Tingzhe Sun, Qianliang Wang, Weihong Xie, Rongfu Wang, Jun Cui *J Cell Biol*. 2015 Dec 7; 211(5): 1025–1040. doi: 10.1083/jcb.201505091 PMCID: PMC4674279 Kristina Ludigs

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**NLRP8:** Jia-Qi Chu, Ge Shi, Yi-Ming Fan, In-Wook Choi, Guang-Ho Cha, Yu Zhou, Young-Ha Lee, Juan-Hua Quan Korean J Parasitol. 2016 Dec; 54(6): 711–717. Published online 2016 Dec 31. doi: 10.3347/kjp.2016.54.6.711 PMID: 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. Griffiths Front 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 Tagliatela, David A. Bennett, Philip L. De Jager, Joshua M. Shulman, Hugo J. Bellen, Hui-Chen Lu PLoS Biol. 2016 Jun; 14(6): e1002472. Published online 2016 Jun 2. doi: 10.1371/journal.pbio.1002472 PMID: PMC4890852 Yousuf O. Ali, Gillian Bradley, Hui-Chen Lu Sci Rep. 2017; 7: 43846. Published online 2017 Mar 7.

**NNMT:** Human nicotinamide N-methyltransferase gene: molecular cloning, structural characterization and chromosomal localization. (PMID: 8575745) Aksoy S ... Weinshilboum RM Genomics 1995 2 3 4 23 Polymorphisms in folate-related genes and risk of pediatric acute lymphoblastic leukemia. (PMID: 19020309) de Jonge R ... Pieters R Blood 2009 3 23 41 Adipose tissue as a source of nicotinamide N-methyltransferase and homocysteine. (PMID: 18996527) Riederer M ... Zechner R Atherosclerosis 2009 3 23 26 High-throughput multiplex single-nucleotide polymorphism (SNP) analysis in genes involved in methionine metabolism. (PMID: 18427977) Giusti B ... Abbate R Biochemical genetics 2008 3 23 41 Genetic analysis of 56 polymorphisms in 17 genes involved in methionine metabolism in patients with abdominal aortic aneurysm. (PMID: 18635682) Giusti B ... Abbate R Journal of medical genetics 2008

**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.

**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.

**NPSR1:** Neuropeptide S receptor induces neuropeptide expression and associates with intermediate phenotypes of functional gastrointestinal disorders. (PMID: 19732772) Camilleri M . D'Amato M Gastroenterology 2010 3 23 43 56 Biological and genetic interaction between tenascin C and neuropeptide S receptor 1 in allergic diseases. (PMID: 18305139) Orsmark-Pietras C . PARSIFAL Genetics Study Group Human molecular genetics 2008 3 23 43 56 Lack of association between genetic variation in G-protein-couple

**NPY:** Spencer B, Potkar R, Metcalf J, et al. Systemic Central Nervous System (CNS)-targeted Delivery of Neuropeptide Y (NPY) Reduces Neurodegeneration and Increases Neural Precursor Cell Proliferation in a Mouse Model of Alzheimer Disease. The Journal of Biolog

**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.

**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.

**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.

Name: Sample

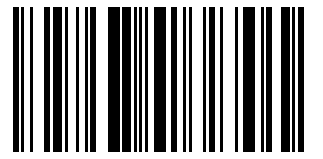
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**NR3C2:** Laursen SB, Finsen S, Marcussen N, Quaggin SE, Hansen PBL, Dimke H. Endothelial mineralocorticoid receptor ablation does not alter blood pressure, kidney function or renal vessel contractility. Joles JA, ed. PLoS ONE. 2018;13(2):e0193032. doi:10.1371/jour

**NRF2:** Tebay LE, Robertson H, Durant ST, et al. Mechanisms of activation of the transcription factor Nrf2 by redox stressors, nutrient cues, and energy status and the pathways through which it attenuates degenerative disease. Free radical biology & medicine. 201

**NRG1:** Papaleo F, Yang F, Paterson C, et al. Behavioral, Neurophysiological, and Synaptic Impairment in a Transgenic Neuregulin1 (NRG1-IV) Murine Schizophrenia Model. The Journal of Neuroscience. 2016;36(17):4859-4875. doi:10.1523/JNEUROSCI.4632-15.2016.

**NRG3:** Neuregulin-3 (NRG3): a novel neural tissue-enriched protein that binds and activates ErbB4. (PMID: 9275162) Zhang D . Godowski PJ Proceedings of the National Academy of Sciences of the United States of America 1997 2 3 4 23 58 Neuregulin 3 genetic variations and susceptibility to schizophrenia in a Chinese population. (PMID: 18708184) Wang YC . Liou YJ Biological psychiatry 2008 3 23 45 58 Characterization of a neural-specific splicing form of the human neuregulin 3 gene involved in oligode

**NRP1:** Zhu Y, Rong L, Luo Q, et al. The Histone Chaperone NRP1 Interacts with WEREWOLF to Activate GLABRA2 in Arabidopsis Root Hair Development. The Plant Cell. 2017;29(2):260-276. doi:10.1105/tpc.16.00719.

**NRXN3:** Identification and characterization of heart-specific splicing of human neurexin 3 mRNA (NRXN3). (PMID: 12379233) Occhi G . Antonio Danieli G Biochemical and biophysical research communications 2002 2 3 4 23 56 Analysis of the human neurexin genes: alternative splicing and the generation of protein diversity. (PMID: 11944992) Rowen L . Graveley BR Genomics 2002 2 3 4 23 56 NRXN3 is a novel locus for waist circumference: a genome-wide association study from the CHARGE Consortium. (PMID: 1955

**NT5C2:**

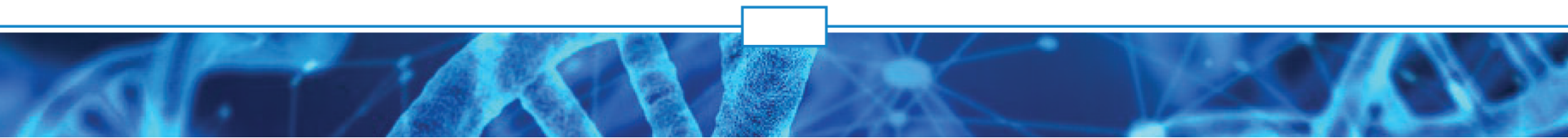
**NTF3:** Peng W, Zhu S, Wang J, Chen L, Weng J, Chen S. Lnc-NTF3-5 promotes osteogenic differentiation of maxillary sinus membrane stem cells via sponging miR-93-3p. Clinical Implant Dentistry and Related Research. 2018;20(2):110-121. doi:10.1111/cid.12553.

**NTM:** 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 Variants in several genomic regions associated with asperger disorder. (PMID: 21182207) Salyakina D ... Pericak-Vance MA Autism research : official journal of the International Society for Autism Research 2010 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 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 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 Genome-wide analyses of aggressiveness in attention-deficit hyperactivity disorder Erlend J. Brevik,Marjolein M. J. van Donkelaar,Heike Weber,Cristina Sánchez-Mora,Christian Jacob,Olga Rivero,Sarah Kittel-Schneider,Iris Garcia-Martínez,Marcel Aebi

**NTRK2:** Cloning and chromosomal localization of the human TRK-B tyrosine kinase receptor gene (NTRK2). (PMID: 7789988) Nakagawara A . Brodeur GM Genomics 1995 2 3 4 23 56 Sequence variations of ABCB1, SLC6A2, SLC6A3, SLC6A4, CREB1, CRHR1 and NTRK2: association with major depression and antidepressant response in Mexican-Americans. (PMID: 19844206) Dong C . Licinio J Molecular psychiatry 2009 3 23 43 56 Gene-gene interactions among CHRNA4, CHRN2, BDNF, and NTRK2 in nicotine dependence. (PMID: 18534

**NTRK3:**

**NXP1:** Vallée Marcotte B, Guénard F, Cormier H, et al. Plasma Triglyceride Levels May Be Modulated by Gene Expression of IQCJ, NXP1, PHF17 and MYB in Humans. Ferguson L, Parslow VR, eds. International Journal of Molecular Sciences.



Name: Sample

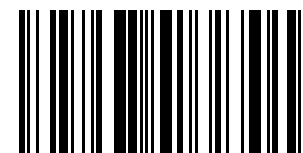
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Prescriber:

Health Insurance:



Sample

**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:

**OPCML:** OPCML at 11q25 is epigenetically inactivated and has tumor-suppressor function in epithelial ovarian cancer. (PMID: 12819783) Sellar GC . Gabra H *Nature genetics* 2003 3 4 23 56 Cloning, sequencing and localization to chromosome 11 of a cDNA encoding a human opioid-binding cell adhesion molecule (OBCAM). (PMID: 7721093) Shark KB . Lee NM *Gene* 1995 3 4 23 56 Variation at the NFATC2 locus increases the risk of thiazolidinedione-induced edema in the Diabetes REduction Assessment with ramipril a

**OPN4:** A novel human opsin in the inner retina. (PMID: 10632589) Provencio I . Rollag MD *The Journal of neuroscience : the official journal of the Society for Neuroscience* 2000 2 3 4 23 58 A missense variant (P10L) of the melanopsin (OPN4) gene in seasonal affective disorder. (PMID: 18804284) Roecklein KA . Provencio I *Journal of affective disorders* 2009 3 23 45 58 Addition of human melanopsin renders mammalian cells photoresponsive. (PMID: 15674244) Melyan Z . Hankins MW *Nature* 2005 3 4 23 58 Cir

**OPRD1:** Ji H, Wang Y, Liu G, et al. Elevated OPRD1 promoter methylation in Alzheimer's disease patients. Chiba-Falek O, ed. *PLoS ONE*. 2017;12(3):e0172335. doi:10.1371/journal.pone.0172335.

**OPRM1:** Yamano S, Viet CT, Dang D, et al. Ex vivo non-viral gene delivery of  $\mu$ -opioid receptor (OPRM1) to attenuate cancer-induced pain. *Pain*. 2017;158(2):240-251.

**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

**P2RX7:** Young CNJ, Górecki DC. P2RX7 Purinoceptor as a Therapeutic Target—The Second Coming? *Frontiers in Chemistry*. 2018;6:248. doi:10.3389/fchem.2018.00248.

**P2RY2:** Cloning and expression of a human P2U nucleotide receptor, a target for cystic fibrosis pharmacotherapy. (PMID: 8159738) Parr CE . Turner JT *Proceedings of the National Academy of Sciences of the United States of America* 1994 2 3 4 23 58 Purinergic receptor P2Y, G-protein coupled, 2 (P2RY2) gene is associated with cerebral infarction in Japanese subjects. (PMID: 19763137) Wang Z . Hinohara S *Hypertension research : official journal of the Japanese Society of Hypertension* 2009 3 23 45 58 Ass

**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.

**PALB2:** Bleuyard J-Y, Fournier M, Nakato R, et al. MRG15-mediated tethering of PALB2 to unperturbed chromatin protects active genes from genotoxic stress. *Proceedings of the National Academy of Sciences of the United States of America*. 2017;114(29):7671-7676. doi

**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.

**PCDH15:** Choudhary D, Kumar A, Magliery TJ, Sotomayor M. Using thermal scanning assays to test protein-protein interactions of inner-ear cadherins. Komarova Y, ed. *PLoS ONE*. 2017;12(12):e0189546. doi:10.1371/journal.pone.0189546.

**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.

Name: Sample

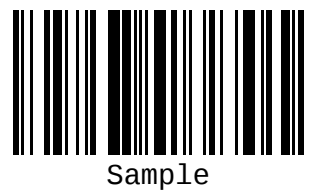
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Report Date: 15/05/2025

Prescriber:

Health Insurance:



**PCK1:** A Leu184Val polymorphism in PCK1 gene is associated with type 2 diabetes in Eastern Chinese population with BMI<23 kg/m<sup>2</sup>. (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  $\alpha$ -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.

**PDE10A:** Cloning and characterization of a novel human phosphodiesterase that hydrolyzes both cAMP and cGMP (PDE10A). (PMID: 10373451) Fujishige K ... Omori K The Journal of biological chemistry 1999 2 3 4 24 Biallelic Mutations in PDE10A Lead to Loss of Striatal PDE10A and a Hyperkinetic Movement Disorder with Onset in Infancy. (PMID: 27058446) Diggle CP ... Brandon NJ American journal of human genetics 2016 3 4 70 De Novo Mutations in PDE10A Cause Childhood-Onset Chorea with Bilateral Striatal Lesions. (PMID: 27058447) Mencacci NE ... Bhatia KP American journal of human genetics 2016 3 4 70 The human phosphodiesterase PDE10A gene genomic organization and evolutionary relatedness with other PDEs containing GAF domains. (PMID: 10998054) Fujishige K ... Omori K European journal of biochemistry 2000 3 4 21 Isolation and characterization of PDE10A, a novel human 3', 5'-cyclic nucleotide phosphodiesterase. (PMID: 10393245) Loughney K ... Florio VA Gene 1999 Chorea-related mutations in PDE10A result in aberrant compartmentalization and functionality of the enzyme. (PMID: 31871190) Tejeda GS ... Baillie GS Proceedings of the National Academy of Sciences of the United States of America 2020

**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 . Kuhlenbäumer G American journal of human genetics 2010 3 4 23 58 Abnormalities of cAMP signaling are present in adrenocorti

**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 Li PLoS Genet. 2014 Aug; 10(8): e1004576. Published online 2014 Aug 28. doi: 10.1371/journal.pgen.1004576 PMID: PMC4148213 Mitsuro Kanda, Shuji Nomoto, Hisaharu Oya, Ryoji Hashimoto, Hideki Takami, Dai Shimizu, Fuminori Sonohara, Daisu

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**PDYN:** Kononenko O, Bazov I, Watanabe H, et al. OPIOID PRECURSOR PROTEIN ISOFORM IS TARGETED TO THE CELL NUCLEI IN THE HUMAN BRAIN. *Biochimica et biophysica acta*. 2017;1861(2):246-255. doi:10.1016/j.bbagen.2016.11.002.

**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.

**PER3:** Turco M, Biscontin A, Corrias M, et al. Diurnal preference, mood and the response to morning light in relation to polymorphisms in the human clock gene PER3. *Scientific Reports*. 2017;7:6967. doi:10.1038/s41598-017-06769-w.

**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.

**PGR:** Kurbel S, Dmitrovi? B, Marjanovi? K, Vrbanec D, Jureti? A. Distribution of Ki-67 values within HER2 & ER/PgR expression variants of ductal breast cancers as a potential link between IHC features and breast cancer biology. *BMC Cancer*. 2017;17:231. doi:10.1

**PHACTR3:** Hubers AJ, Heideman DAM, Burgers SA, et al. DNA hypermethylation analysis in sputum for the diagnosis of lung cancer: training validation set approach. *British Journal of Cancer*. 2015;112(6):1105-1113. doi:10.1038/bjc.2014.636.

**PHEX:** Expression and cloning of the human X-linked hypophosphatemia gene cDNA. (PMID: 9070861) Grieff M . Schlessinger D *Biochemical and biophysical research communications* 1997 2 3 4 23 56 A gene (PEX) with homologies to endopeptidases is mutated in patients with X-linked hypophosphatemic rickets. The HYP Consortium. (PMID: 7550339) *Nature genetics* 1995 2 3 4 23 56 Identification of fifteen novel PHEX gene mutations in Finnish patients with hypophosphatemic rickets. (PMID: 10737991) Tynismaa H

**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

**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 PMCID: PMC6042707 Vanessa F. Merino, Soonweng Cho, Xiaohui Liang, Sunju Park, Kideok Jin, Qian Chen, Duoqia Pan, Cynthia A. Zahnow, Alan R. Rein, Saraswati Sukumar *Mol Oncol*. 2017 May; 11(5): 552-566. Published online 2017 Apr 6. doi

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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.00000000000003542.

**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.

**PLAU:** Hayward CPM, Liang M, Tasneem S, et al. The duplication mutation of Quebec platelet disorder dysregulates PLAU, but not C10orf55, selectively increasing production of normal PLAU transcripts by megakaryocytes but not granulocytes. Schulz C, ed. *PLoS ONE*.

**PLCB2:** Yang M, Li H, Li Y, Ruan Y, Quan C. Identification of genes and pathways associated with MDR in MCF-7/MDR breast cancer cells by RNA-seq analysis. *Molecular Medicine Reports*. 2018;17(5):6211-6226. doi:10.3892/mmr.2018.8704.

**PLCL1:** Zhou R, Lin X, Li D-Y, et al. Identification of novel genetic loci for osteoporosis and/or rheumatoid arthritis using cFDR approach. Wei Z, ed. *PLoS ONE*. 2017;12(8):e0183842. doi:10.1371/journal.pone.0183842.

**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.

**PLEK:** Structure and dynamics of the human pleckstrin DEP domain: distinct molecular features of a novel DEP domain subfamily. (PMID: 15573383) Civera C . Macias MJ *Proteins* 2005 3 4 23 56 Phosphorylation of human pleckstrin on Ser-113 and Ser-117 by protein kinase C. (PMID: 8615792) Craig KL . Harley CB *The Biochemical journal* 1996 3 4 23 56 Solution structure of a pleckstrin-homology domain. (PMID: 8208296) Yoon HS . Fesik SW *Nature* 1994 3 4 23 56 Molecular cloning and expression of the major pr

**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.

**PLEKHM1:** Novel adapter protein AP162 connects a sialyl-Le(x)-positive mucin with an apoptotic signal transduction pathway. (PMID: 12820725) Hartel-Schenk S . Hanski C *Glycoconjugate journal* 2001 2 3 4 23 56 Prediction of the coding sequences of unidentified human genes. VII. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro. (PMID: 9205841) Nagase T . Ohara O *DNA research : an international journal for rapid publication of reports on genes and genome*

**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

**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.

**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.

**POLD1:** Central mediator of DNA replication and repair, and implication in cancer and other pathologies. Nicolas E, Golemis EA, Arora S. *Gene*. 2016 Sep 15;590(1):128-41. doi: 10.1016/j.gene.2016.06.031. Epub 2016 Jun 16. Review. PMID: 27320729

Name: Sample

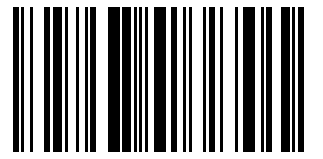
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Prescriber:

Health Insurance:



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**POLN:** Takata K, Reh S, Yousefzadeh MJ, et al. Analysis of DNA polymerase  $\gamma$  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 Diano Annu 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-022516-034110 PMID: PMC5669621 Anna Santoro, Michela Campolo, Chen Liu, Hiromi Sesaki, Rosaria Meli, Zhong-Wu Liu, Jung Dae Kim, Sabrina Diano Cell Metab. Author manuscript; available in PMC 2018 Mar 7. Published in final edited form as: Cell Metab. 2017 Mar 7; 25(3): 6

**PPARA:** Brocker 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 PPARgamma 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 PPARgamma 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 $\gamma$ , LXR $\beta$ , and ROR $\alpha$  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 $\gamma$  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  $\alpha$  and peroxisome proliferator-activated receptor  $\gamma$  in metabolism and disease (Review). (PMID: 33355368) Huang WY ... Sun PM Molecular medicine reports 2021 3 Effects of FTO and PPAR $\gamma$  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- $\gamma$ , 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 $\gamma$  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- $\gamma$ /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 $\gamma$  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 $\gamma$  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 $\gamma$ /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

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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.

**PPFIA2:** Singh M, Tyagi SC. Genes and genetics in eye diseases: a genomic medicine approach for investigating hereditary and inflammatory ocular disorders. *International Journal of Ophthalmology*. 2018;11(1):117-134. doi:10.18240/ijo.2018.01.20.

**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.

**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

**PPP2R2B:** O'Hearn EE, Hwang HS, Holmes SE, et al. Neuropathology and Cellular Pathogenesis of Spinocerebellar Ataxia Type 12. *Movement disorders?: official journal of the Movement Disorder Society*. 2015;30(13):1813-1824. doi:10.1002/mds.26348.

**PPP3CA:** Imai Y, Ohta E, Takeda S, et al. Histone deacetylase inhibitor panobinostat induces calcineurin degradation in multiple myeloma. *JCI Insight*. 2016;1(5):e85061. doi:10.1172/jci.insight.85061.

**PRDM11:** Loss of PRDM11 promotes MYC-driven lymphomagenesis. (PMID: 25499759) Fog CK ... Lund AH *Blood* 2015 3 4 Genome-wide association analysis identifies six new loci associated with forced vital capacity. (PMID: 24929828) Loth DW ... London SJ *Nature genetics* 2014 3 4 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T ... Sugano S *Nature genetics* 2004 3 4 A reference map of the human binary protein interactome. (PMID: 32296183) Luck K ... Calderwood MA *Nature* 2020 3 Impaired plasma membrane localization of ubiquitin ligase complex underlies 3-M syndrome development. (PMID: 31343991) Wang P ... Xiong Y *The Journal of clinical investigation* 2019 3

**PRDM16:** Kissig M, Ishibashi J, Harms MJ, et al. PRDM16 represses the type I interferon response in adipocytes to promote mitochondrial and thermogenic programming. *The EMBO Journal*. 2017;36(11):1528-1542. doi:10.15252/embj.201695588.

**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.

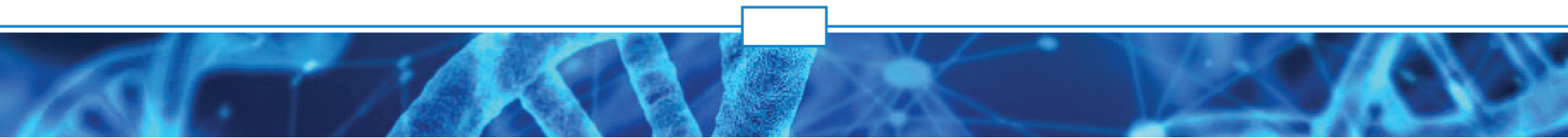
**PRICKLE2:** Nagaoka T, Tabuchi K, Kishi M. PDZ interaction of Vangl2 links PSD-95 and Prickle2 but plays only a limited role in the synaptic localisation of Vangl2. *Scientific Reports*. 2015;5:12916. doi:10.1038/srep12916.

**PRIMA1:** Barbara Kinga Barták, Alexandra Kalmár, Bálint Péterfia, Árpád V. Patai, Orsolya Galamb, Gábor Valcz, Sándor Spisák, Barnabás Wichmann, Zsófia Brigitta Nagy, Kinga Tóth, Zsolt Tulassay, Péter Igaz, Béla Molnár *Epigenetics*. 2017; 12(9): 751–763. Published online 2017 Sep 26. doi: 10.1080/15592294.2017.1356957 PMID: PMC5739100 Michael S Hildebrand, Rick Tankard, Elena V Gazina, John A Damiano, Kate M Lawrence, Hans-Henrik M Dahl, Brigid M Regan, Aiden Eliot Shearer, Richard J H Smith, Carla Mar

**PRKD1:** Nickkholgh B, Sittadjody S, Rothberg MB, et al. Beta-catenin represses protein kinase D1 gene expression by non-canonical pathway through MYC/MAX transcription complex in prostate cancer. *Oncotarget*. 2017;8(45):78811-78824. doi:10.18632/oncotarget.20229.

**PRNP:** Salazar SV, Gallardo C, Kaufman AC, et al. Conditional Deletion of Prnp Rescues Behavioral and Synaptic Deficits after Disease Onset in Transgenic Alzheimer's Disease. *The Journal of Neuroscience*. 2017;37(38):9207-9221. doi:10.1523/JNEUROSCI.0722-17.2017.

**PRPF3:**



Name: Sample

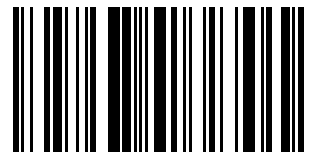
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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  $\gamma$ -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.

**PSORS1C1:** Sun B, Cheng L, Xiong Y, et al. PSORS1C1 Hypomethylation Is Associated with Allopurinol-Induced Severe Cutaneous Adverse Reactions during Disease Onset Period: A Multicenter Retrospective Case-Control Clinical Study in Han Chinese. *Frontiers in Pharmacology*

**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 lincRNA 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 Campbell *eLife*. 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

**PTGDR2:** Tinika A. Montgomery, Leyuan Xu, Sherene Mason, Amirtha Chinnadurai, Chun Geun Lee, Jack A. Elias, Lloyd G. Cantley *Am Soc Nephrol*. 2017 Nov; 28(11): 3218–3226. Published online 2017 Jul 5. doi: 10.1681/ASN.2017010110PMCID: PMC5661290Tao Huang, Meredith Hazen, Yonglei Shang, Meijuan Zhou, Xiumin Wu, Donghong Yan, Zhonghua Lin, Margaret Solon, Elizabeth Luis, Hai Ngu, Yongchang Shi, Arna Katewa, David F. Choy, Nandhini Ramamoorthi, Erick R. Castellanos, Mercedesz Balazs, Min Xu, Wyne P. Lee

Name: Sample

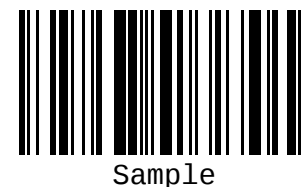
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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 PMID: 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.

**PTPRF:** Functional association between the insulin receptor and the transmembrane protein-tyrosine phosphatase LAR in intact cells. (PMID: 8995282) Ahmad F. Goldstein BJ The Journal of biological chemistry 1997 3 4 23 58 Distinct functional roles of the two intracellular phosphatase like domains of the receptor-linked protein tyrosine phosphatases LCA and LAR. (PMID: 1695146) Streuli M. Saito H The EMBO journal 1990 3 4 23 58 Homozygous truncating PTPRF mutation causes athelia. (PMID: 24781087) B

**PTPRN2:** Sengelaub CA, Navrazhina K, Ross JB, Halberg N, Tavazoie SF. PTPRN2 and PLC?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.

**PTS:** Liu H, Smith TPL, Nonneman DJ, Dekkers JCM, Tuggle CK. A high-quality annotated transcriptome of swine peripheral blood. BMC Genomics. 2017;18:479. doi:10.1186/s12864-017-3863-7.

**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 3 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.

**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.

**RAB23:** Hor CHH, Goh ELK. Rab23 Regulates Radial Migration of Projection Neurons via N-cadherin. Cerebral Cortex (New York, NY). 2018;28(4):1516-1531. doi:10.1093/cercor/bhy018.

**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.

**RARRES2:** Er L-K, Wu S, Hsu L-A, Teng M-S, Sun Y-C, Ko Y-L. Pleiotropic Associations of RARRES2 Gene Variants and Circulating Chemerin Levels: Potential Roles of Chemerin Involved in the Metabolic and Inflammation-Related Diseases. Mediators of Inflammation. 2018;2

**RASA1:** Capillary malformation-arteriovenous malformation, a new clinical and genetic disorder caused by RASA1 mutations. (PMID: 14639529) Eerola I. Vikkula M American journal of human genetics 2003 3 4 23 56 Src-induced phosphorylation of caveolin-2 on tyrosine 19. Phospho-caveolin-2 (Tyr(P)19) is localized near focal adhesions, remains associated with lipid rafts/caveolae, but no longer forms a high molecular mass hetero-oligomer with caveolin-1. (PMID: 12091389) Lee H. Lisanti MP The Journal o

**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.

**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.

Name: Sample

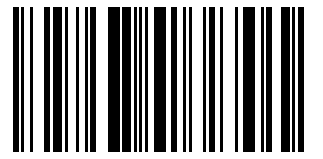
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**RELN:**

**RERE:** Protein binding of a DRPLA family through arginine-glutamic acid dipeptide repeats is enhanced by extended polyglutamine. (PMID: 10814707) Yanagisawa H ... Yamada M Human molecular genetics 2000 2 3 4 21 De Novo Mutations of RERE Cause a Genetic Syndrome with Features that Overlap Those Associated with Proximal 1p36 Deletions. (PMID: 27087320) Fregeau B ... Sherr EH American journal of human genetics 2016 3 4 70 Atrophin proteins interact with the Fat1 cadherin and regulate migration and orientation in vascular smooth muscle cells. (PMID: 19131340) Hou R ... Sibinga NE The Journal of biological chemistry 2009 3 4 21 Identification and characterization of novel genes located at the t(1;15)(p36.2;q24) translocation breakpoint in the neuroblastoma cell line NGP. (PMID: 10729226) Amler LC ... Hampton GM Genomics 2000 2 3 4 Genome-wide association study identifies five new schizophrenia loci. (PMID: 21926974) Schizophrenia Psychiatric Genome-Wide Association Study (GWAS) Consortium Nature genetics 2011 3 39 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 Variant of TYR and autoimmunity susceptibility loci in generalized vitiligo. (PMID: 20410501) Jin Y ... Spritz RA The New England journal of medicine 2010 3 39

**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.

**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.

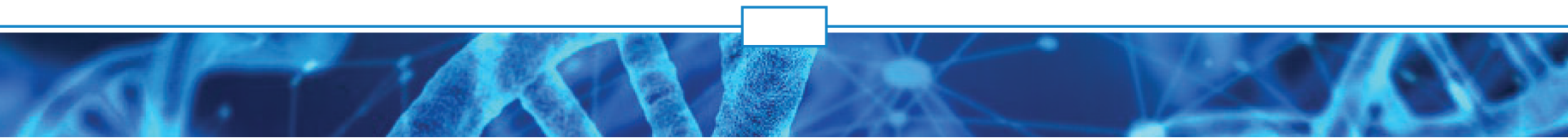
**RLN3:** Calvez J, de Ávila C, Timofeeva E. Sex-specific effects of relaxin-3 on food intake and body weight gain. British Journal of Pharmacology. 2017;174(10):1049-1060. doi:10.1111/bph.13530.

**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.

**RP11:** A human homolog of yeast pre-mRNA splicing gene, PRP31, underlies autosomal dominant retinitis pigmentosa on chromosome 19q13.4 (RP11). (PMID: 11545739) Vithana EN ... Bhattacharya SS Molecular cell 2001 2 3 4 21 70 Mutations in the gene coding for the pre-mRNA splicing factor, PRPF31, in patients with autosomal dominant retinitis pigmentosa. (PMID: 17325180) Waseem NH ... Bhattacharya SS Investigative ophthalmology & visual science 2007 3 21 39 70 Retinitis pigmentosa: mutation analysis of RHO, PRPF31, RP1, and IMPDH1 genes in patients from India. (PMID: 18552984) Gandra M ... Govindasamy K Molecular vision 2008 3 21 39 Binding of the human Prp31 Nop domain to a composite RNA-protein platform in U4 snRNP. (PMID: 17412961) Liu S ... Wahl MC Science (New York, N.Y.) 2007 3 4 70 Novel deletion in the pre-mRNA splicing gene PRPF31 causes autosomal dominant retinitis pigmentosa in a large Chinese family. (PMID: 12923864) Wang L ... Wang Q American journal of medical genetics. Part A 2003 3 4 70

**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



Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**RYR2:** Gerhard Meissner *J Gen Physiol.* 2017 Dec 4; 149(12): 1065–1089. doi: 10.1085/jgp.201711878 PMID: PMC5715910 Zhichao Xiao, Wenting Guo, Siobhan M. Wong King Yuen, Ruiwu Wang, Lin Zhang, Filip Van Petegem, S. R. Wayne Chen *PLoS One.* 2015; 10(9): e0139058. Published online 2015 Sep 25. doi: 10.1371/journal.pone.0139058 PMID: 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 Yu *PLoS One.* 2014; 9(8): e103947. Published online 2014 Aug 1. doi: 10.1371/journal.pone.0103947 PMID: 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. Gross *Sci Rep.* 2018; 8: 11488. Published online 2018 Jul 31. doi: 10.1038/s41598-018-29852-2 PMID: PMC6068119 Filip Prica, Tomasz Radon, Yuzhu Cheng, Tatjana Crnogorac-

**SASH1:** Novel mutations in SASH1 associated with dyschromatosis universalis hereditaria. (PMID: 29956681) Zhong WL ... Yang Y *Indian journal of dermatology, venereology and leprology* 2019 3 4 70 A Novel De novo Mutation of the SASH1 Gene in a Chinese Family with Multiple Lentiginos. (PMID: 27840890) Wang J ... Li M *Acta dermato-venereologica* 2017 3 4 70 A novel P53/POMC/Gas/SASH1 autoregulatory feedback loop activates mutated SASH1 to cause pathologic hyperpigmentation. (PMID: 27885802) Zhou D ... Xing Q *Journal of cellular and molecular medicine* 2017 3 4 70 Lentiginous phenotypes caused by diverse pathogenic genes (SASH1 and PTPN11): clinical and molecular discrimination. (PMID: 27659786) Zhang J ... Yao Z *Clinical genetics* 2016 3 4 70 Autosomal-recessive SASH1 variants associated with a new genodermatosis with pigmentation defects, palmoplantar keratoderma and skin carcinoma. (PMID: 25315659) Courcet JB ... Faivre L *European journal of human genetics : EJHG* 2015 SASH1 suppresses triple-negative breast cancer cell invasion through YAP-ARHGAP42-actin axis. (PMID: 32523092) Jiang K ... Meng S *Oncogene* 2020 3 SASH1 is a prognostic indicator and potential therapeutic target in non-small cell lung cancer. (PMID: 33122723) Burgess JT ... O'Byrne KJ *Scientific reports* 2020 3 Expression of SASH1 in Preeclampsia and Its Effects on Human Trophoblast. (PMID: 33134379) Liu S ... Yu Y *BioMed research international* 2020 3 Involvement of SASH1 in the Maintenance of Stable Cell-Cell Adhesion. (PMID: 32586229) Ilnitskaya AS ... Gloushankova NA *Biochemistry. Biokhimiia* 2020

**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.

**SCN1A:** Spectrum of SCN1A gene mutations associated with Dravet syndrome: analysis of 333 patients. (PMID: 18930999) Depienne C ... LeGuern E *Journal of medical genetics* 2009 3 4 21 39 69 Mutational analysis of the SCN1A, SCN1B and GABRG2 genes in 150 Italian patients with idiopathic childhood epilepsies. (PMID: 19522081) Orrico A ... Sorrentino V *Clinical genetics* 2009 3 4 21 39 69 The spectrum of SCN1A-related infantile epileptic encephalopathies. (PMID: 17347258) Harkin LA ... Scheffer IE *Brain : a journal of neurology* 2007 3 4 21 39 69 A common polymorphism in the SCN1A gene associates with phenytoin serum levels at maintenance dose. (PMID: 17001291) Tate SK ... Liou HH *Pharmacogenetics and genomics* 2006 3 21 24 39 69 Mutations of neuronal voltage-gated Na<sup>+</sup> channel alpha 1 subunit gene SCN1A in core severe myoclonic epilepsy in infancy (SMEI) and in borderline SMEI (SMEB). (PMID: 14738421) Fukuma G ... Hirose S *Epilepsia* 2004

**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.

**SDCCAG8:** Candidate exome capture identifies mutation of SDCCAG8 as the cause of a retinal-renal ciliopathy. (PMID: 20835237) Otto EA . Hildebrandt F *Nature genetics* 2010 2 3 4 56 Identification and characterization of the novel centrosome-associated protein CCCAP. (PMID: 12559564) Kenedy AA . Dang CV *Gene* 2003 3 4 23 56 Characterization of human colon cancer antigens recognized by autologous antibodies. (PMID: 9610721) Scanlan MJ . Old LJ *International journal of cancer* 1998 2 3 4 56 SDCCAG8 Interac

**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,<sup>1</sup> Dug Yeo Han,<sup>2</sup> Shuotun Zhu,<sup>1</sup> Jie Yu,<sup>2</sup> Katja Lange,<sup>2</sup> He Duan,<sup>1</sup> Roxanne Medhora,<sup>2</sup> Nabitha Singh,<sup>2</sup> James Kan,<sup>2</sup> Waseem Alzaher,<sup>2</sup> Benson Chen,<sup>2</sup> Sarah Ko,<sup>2</sup> Christopher M. Triggs,<sup>3</sup> and Lynnette R. Ferguson<sup>corresponding author</sup><sup>1,2</sup>

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**SEMA3A:**

**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.

**SERPINA1:** Connolly B, Isaacs C, Cheng L, Asrani KH, Subramanian RR. SERPINA1 mRNA as a Treatment for Alpha-1 Antitrypsin Deficiency. *Journal of Nucleic Acids*. 2018;2018:8247935. doi:10.1155/2018/8247935.

**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.

**SERPINC1:** Molecular basis of inherited antithrombin deficiency in Portuguese families: identification of genetic alterations and screening for additional thrombotic risk factors. (PMID: 15164384) David D . Crespo F *American journal of hematology* 2004 3 4 23 58 Antithrombin Phe229Leu: a new homozygous variant leading to spontaneous antithrombin polymerization in vivo associated with severe childhood thrombosis. (PMID: 12595305) Picard V . Aiach M *Blood* 2003 3 4 45 58 Antithrombin 'DREUX' (Lys 114Glu):

**SGMS1:** Filippenkov IB, Sudarkina OY, Limborska SA, Dergunova LV. Circular RNA of the human sphingomyelin synthase 1 gene: Multiple splice variants, evolutionary conservatism and expression in different tissues. *RNA Biology*. 2015;12(9):1030-1042. doi:10.1080/1547

**SGSH:** Whyte LS, Hopwood JJ, Hemsley KM, Lau AA. Variables influencing fluorimetric N-sulfoglucosamine sulfohydrolase (SGSH) activity measurement in brain homogenates. *Molecular Genetics and Metabolism Reports*. 2015;5:60-62. doi:10.1016/j.ymgmr.2015.10.005.

**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.

**SH3BP2:** Mutations in the gene encoding c-Abl-binding protein SH3BP2 cause cherubism. (PMID: 11381256) Ueki Y ... Reichenberger E *Nature genetics* 2001 2 3 4 21 69 A missense mutation in the SH3BP2 gene on chromosome 4p16.3 found in a case of nonfamilial cherubism. (PMID: 14577811) Imai Y ... Yamada A *The Cleft palate-craniofacial journal : official publication of the American Cleft Palate-Craniofacial Association* 2003 3 4 21 69 Novel mutation in the gene encoding c-Abl-binding protein SH3BP2 causes cherubism. (PMID: 12900899) Lo B ... Teebi AS *American journal of medical genetics. Part A* 2003 3 4 21 69 Investigation of the SH3BP2 gene mutation in cherubism. (PMID: 18596838) Lee JY ... Yoon JH *Acta medica Okayama* 2008 3 21 69 A new mutation in the SH3BP2 gene showing reduced penetrance in a family affected with cherubism. (PMID: 17321449) de Lange J ... Redeker EJ *Oral surgery, oral medicine, oral pathology, oral radiology, and endodontics* 2007 3 21 69 Identification and characterization of the human homologue of SH3BP2, an SH3 binding domain protein within a common region of deletion at 4p16.3 involved in bladder cancer. (PMID: 9299232) Bell SM ... Knowles MA *Genomics* 1997 2 3 4 A c.1244G>A (p.Arg415Gln) mutation in SH3BP2 gene causes cherubism in a Turkish family: report of a family with review of the literature. (PMID: 24608212) Sekerci AE ... Bayrakdar IS *Medicina oral, patologia oral y cirugia bucal* 2014

**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.



Name: Sample

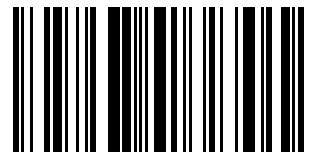
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**SHANK2:** Mutations in the SHANK2 synaptic scaffolding gene in autism spectrum disorder and mental retardation. Nature genetics Berkel S ... Rappold GA (PMID:20473310) Protein 4 , Gene 39 3 , Disorder 69 , GeneVariant 108 2010 249 Identification of a Novel SHANK2 Pathogenic Variant in a Patient with a Neurodevelopmental Disorder. Genes Doddato G ... Ariani F (PMID:35456494) Gene 3 , Disorder 69 , GeneVariant 108 2022 1 Characterization of the Shank family of synaptic proteins. Multiple genes, alternative splicing, and differential expression in brain and development. The Journal of biological chemistry Lim S ... Kim E (PMID:10506216) Gene 3 2 , Protein 4 1999 137 The Shank family of scaffold proteins. Journal of cell science Sheng M ... Kim E (PMID:10806096) Gene 3 21 , Protein 4 2000 254 SHANK2 mutations associated with autism spectrum disorder cause hyperconnectivity of human neurons. Nature neuroscience Zaslavsky K ... Ellis J (PMID:30911184) Gene 3 , GeneVariant 108 2019 73 Targeted resequencing of 358 candidate genes for autism spectrum disorder in a Chinese cohort reveals diagnostic potential and genotype-phenotype correlations. Human mutation Zhou WZ ... Wei L (PMID:30763456) Disorder 69 , GeneVariant 108 2019 16 Distinct Phenotypes of Shank2 Mouse Models Reflect Neuropsychiatric Spectrum Disorders of Human Patients With SHANK2 Variants. Frontiers in molecular neuroscience Eltokhi A ... Sprengel R (PMID:30072871) Disorder 69 , GeneVariant 108 2018 28 Whole-genome sequencing in multiplex families with psychoses reveals mutations in the SHANK2 and SMARCA1 genes segregating with illness. Molecular psychiatry Homann OR ... DeLisi LE (PMID:27001614) Gene 3 , GeneVariant 108 2016 48 Identification and functional characterization of rare SHANK2 variants in schizophrenia. Molecular psychiatry Peykov S ... Rappold GA (PMID:25560758) GeneVariant 108 , Gene 3 2015 43 Inherited and de novo SHANK2 variants associated with autism spectrum disorder impair neuronal morphogenesis and physiology. Human molecular genetics Berkel S ... Rappold GA (PMID:21994763) Gene 3 , GeneVariant 108 2012 63

**SHANK3:** Bey AL, Wang X, Yan H, et al. Brain region-specific disruption of Shank3 in mice reveals a dissociation for cortical and striatal circuits in autism-related behaviors. Translational Psychiatry. 2018;8:94. doi:10.1038/s41398-018-0142-6.

**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. Mansvelde, 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

**SIM1:** Osterberg N, Wiehle M, Oehlke O, et al. Sim1 Is a Novel Regulator in the Differentiation of Mouse Dorsal Raphe Serotonergic Neurons. Sugihara I, ed. PLoS ONE. 2011;6(4):e19239. doi:10.1371/journal.pone.0019239.

**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.

**SLC18A1:** Ramos-Lopez O, Riezu-Boj JI, Milagro FI, et al. Dopamine gene methylation patterns are associated with obesity markers and carbohydrate intake. Brain and Behavior. 2018;8(8):e01017. doi:10.1002/brb3.1017.

**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

Name: Sample

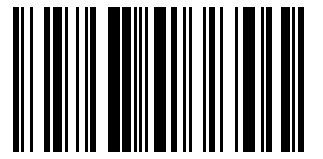
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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 ... Brockmüller 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.

**SLC23A2:** Polymorphisms in the estrogen receptor 1 and vitamin C and matrix metalloproteinase gene families are associated with susceptibility to lymphoma. (PMID: 18636124) Skibola CF ... Smith MT *PloS one* 2008 3 23 41 54 Genetic variation in the sodium-dependent vitamin C transporters, SLC23A1, and SLC23A2 and risk for preterm delivery. (PMID: 16357110) Erichsen HC ... Chanock SJ *American journal of epidemiology* 2006 3 23 41 54 Cloning and functional characterization of the human sodium-dependent vitamin C transporters hSVCT1 and hSVCT2. (PMID: 10556521) Daruwala R ... Levine M *FEBS letters* 1999 3 4 23 54 A human nucleobase transporter-like cDNA (SLC23A1): member of a transporter family conserved from bacteria to mammals. (PMID: 10395795) Hogue DL ... Ling V *Genomics* 1999 3 4 23 54 Human placental sodium-dependent vitamin C transporter (SVCT2): molecular cloning and transport function. (PMID: 10471399) Rajan DP ... Prasad PD *Biochemical and biophysical research communications* 1999

**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 Casanova *PLoS One*. 2012; 7(1): e29708. Published online 2012 Jan 4. doi: 10.1371/journal.pone.0029708 PMID: 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 Chen *Neurobiol 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.2012.06.007 PMID: PMC3419385 Nicole D. Dueker, Shengru Guo, Ashley Beecham, Liyong Wang, Susan H. Blanton, Marco R. Di Tullio, Tatjana Rundek, Ral

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**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 Zn<sup>2+</sup> 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

**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. doi

**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.

**SLC5A5:** Tavares C, Coelho MJ, Eloy C, et al. NIS expression in thyroid tumors, relation with prognosis clinicopathological and molecular features. Endocrine Connections. 2018;7(1):78-90. doi:10.1530/EC-17-0302.

**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.

**SLC6A15:** Association between gene polymorphism and depression in Parkinson's disease: A case-control study. Journal of the neurological sciences Zheng J ... Xu Y (PMID:28320136) Gene 3 2017 6 A Combined Study of SLC6A15 Gene Polymorphism and the Resting-State Functional Magnetic Resonance Imaging in First-Episode Drug-Naive Major Depressive Disorder. Genetic testing and molecular biomarkers Wang L ... Zhang K (PMID:28915082) Gene 3 2017 1 Effects of a Polymorphism of the Neuronal Amino Acid Transporter SLC6A15 Gene on Structural Integrity of White Matter Tracts in Major Depressive Disorder. PloS one Choi S ... Ham BJ (PMID:27723767) Gene 3 2016 9 A variant of the neuronal amino acid transporter SLC6A15 is associated with ACTH and cortisol responses and cognitive performance in unipolar depression. The international journal of neuropsychopharmacology Schuhmacher A ... Mössner R (PMID:22475622) Gene 3 2013 16 SLC6A15 rs1545843 and depression: implications from brain imaging data. The American journal of psychiatry Li M ... Su B (PMID:23820837) Gene 3 2013 5 The neuronal transporter gene SLC6A15 confers risk to major depression. Neuron Kohli MA ... Binder EB (PMID:21521612)

**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.017111

**SLC6A4:** Blazevic S, Horvaticek M, Kesic M, et al. Epigenetic adaptation of the placental serotonin transporter gene (SLC6A4) to gestational diabetes mellitus. Sánchez-Margalet V, ed. PLoS ONE. 2017;12(6):e0179934. doi:10.1371/journal.pone.0179934. Polymorphism C in the serotonin transporter gene in depression-free elderly patients with vascular dementia. Seripa D1, Matera MG, D'Onofrio G, Sancarlo D, Bizzarro A, Cascavilla L, Paris F, Gravina C, Bonghi L, Capurso C, Solfrizzi V, Daniele A, Masullo

**SLC6A5:** Molecular cloning and functional expression of the human glycine transporter GlyT2 and chromosomal localisation of the gene in the human genome. (PMID: 9845349) Morrow JA . Hill DR FEBS letters 1998 2 3 4 23 58 Association study of polymorphisms in the neutral amino acid transporter genes SLC1A4, SLC1A5 and the glycine transporter genes SLC6A5, SLC6A9 with schizophrenia. (PMID: 18638388) Deng X . Fukumaki Y BMC psychiatry 2008 3 23 45 58 Mutations in the gene encoding GlyT2 (SLC6A5) define

Name: Sample

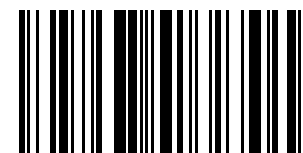
Age:

Gender: M

Report Date: 15/05/2025

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

**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.

**SMOC1:** Characterization of SMOC-1, a novel modular calcium-binding protein in basement membranes. (PMID: 12130637) Vannahme C . Hartmann U The Journal of biological chemistry 2002 2 3 4 56 Loss of the BMP antagonist, SMOC-1, causes Ophthalmo-acromelic (Waardenburg Anophthalmia) syndrome in humans and mice. (PMID: 21750680) Rainger J . Fitzpatrick DR PLoS genetics 2011 3 4 56 Mutations in the SPARC-related modular calcium-binding protein 1 gene, SMOC1, cause waardenburg anophthalmia syndrome. (PMID

**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.

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**SNX29:** The Phox (PX) domain proteins and membrane traffic. (PMID: 16782399) Seet LF . Hong W *Biochimica et biophysica acta* 2006 2 3 56 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T . Sugano S *Nature genetics* 2004 3 4 56 The sequence and analysis of duplication-rich human chromosome 16. (PMID: 15616553) Martin J . Pennacchio LA *Nature* 2004 3 4 56 VIRMA mediates preferential m6A mRNA methylation in 3'UTR and near stop codon and associates with alt

**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

**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) Stoehlmacher 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

**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.

**SORCS2:** Leloup N, Chataigner LMP, Janssen BJC. Structural insights into SorCS2–Nerve Growth Factor complex formation. *Nature Communications*. 2018;9:2979. doi:10.1038/s41467-018-05405-z.

**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.

Name: Sample

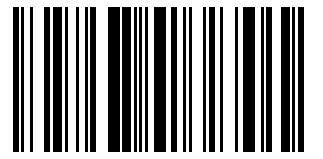
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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.

**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

**SPOCK1:** Chen D, Zhou H, Liu G, Zhao Y, Cao G, Liu Q. SPOCK1 promotes the invasion and metastasis of gastric cancer through Slug-induced epithelial-mesenchymal transition. *Journal of Cellular and Molecular Medicine*. 2018;22(2):797-807. doi:10.1111/jcmm.13357.

**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.

**SPTLC1:** Saïd Taouji, Arisa Higa, Frédéric Delom, Sandrine Palcy, François-Xavier Mahon, Jean-Max Pasquet, Roger Bossé, Bruno Ségui, Eric Chevet *Biol Chem*. 2013 Jun 14; 288(24): 17190–17201. Published online 2013 Apr 29. doi: 10.1074/jbc.M112.409185 PMID: PMC3682524 Norimasa Tamehiro, Suiping Zhou, Keiichiro Okuhira, Yair Benita, Cari E Brown, Debbie Z Zhuang, Eicke Latz, Thorsten Hornemann, Arnold von Eckardstein, Ramnik J Xavier, Mason W Freeman, Michael L Fitzgerald *Biochemistry*. Author manuscript

**SST:** Sequence of the human somatostatin I gene. (PMID: 6142531) Shen LP . Rutter WJ *Science (New York, N.Y.)* 1984 2 3 4 54 Human somatostatin I: sequence of the cDNA. (PMID: 6126875) Shen LP . Rutter WJ *Proceedings of the National Academy of Sciences of the United States of America* 1982 2 3 4 54 Investigation of genetic susceptibility factors for human longevity - a targeted nonsynonymous SNP study. (PMID: 20800603) Flachsbar F . Nebel A *Mutation research* 2010 3 41 54 Physiogenomic analysis of

**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.

**STEAP3:** O produto do gene TSAP6 induzível por p53 regula a apoptose e o ciclo celular e interage com Nix e a Myt1 quinase. (PMID: 12606722) Passer BJ. Telerman A *Anais da Academia Nacional de Ciências dos Estados Unidos da América* 2003 2 3 4 58 A proteína transmembrana de múltiplas passagens relacionada ao exossomo TSAP6 é um alvo da proteólise induzida pela protease romboide RHBDD1. (PMID: 22624035) Wan C. Wang L *PloS one* 2012 3 4 58 Um novo tipo de anemia hipocrômica congênita associada a uma mut

**STMN1:** Probing the native structure of stathmin and its interaction domains with tubulin. Combined use of limited proteolysis, size exclusion chromatography, and mass spectrometry. (PMID: 10702243) Redeker V . Curmi PA *The Journal of biological chemistry* 2000 3 4 23 56 Op18/stathmin caps a kinked protofilament-like tubulin tetramer. (PMID: 10675326) Steinmetz MO . van Oostrum J *The EMBO journal* 2000 3 4 23 56 Transcriptional and post-transcriptional regulation of pr22 (Op18) with proliferation con

**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.

**STT3A:**

**STX1A:** Evidence of syntaxin 1A involvement in migraine susceptibility: a Portuguese study. (PMID: 20385907) Lemos C . Sousa A *Archives of neurology* 2010 3 23 45 58 Contribution of syntaxin 1A to the genetic susceptibility to migraine: a case-control association study in the Spanish population. (PMID: 19368856) Corominas R . Cormand B *Neuroscience letters* 2009 STX1A and Asperger syndrome: a replication study - Jaroslava Durdiaková, Varun Warriar, Sharmila Banerjee-Basu, Simon Baron-Cohen & Bhisma



Name: Sample

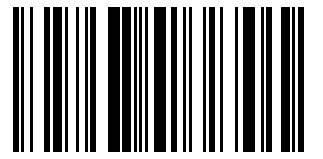
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**SYNE1:** Mutation of SYNE-1, encoding an essential component of the nuclear lamina, is responsible for autosomal recessive arthrogyriposis. (PMID: 19542096) Attali R ... Melki J Human molecular genetics 2009 3 4 21 69 Nesprin-1 and -2 are involved in the pathogenesis of Emery Dreifuss muscular dystrophy and are critical for nuclear envelope integrity. (PMID: 17761684) Zhang Q ... Shanahan CM Human molecular genetics 2007 3 4 21 69 Homozygous SYNE1 mutation causes congenital onset of muscular weakness with distal arthrogyriposis: a genotype-phenotype correlation. (PMID: 27782104) Baumann M ... Janecke AR European journal of human genetics : EJHG 2017 3 4 69 Structural requirements for the assembly of LINC complexes and their function in cellular mechanical stiffness. (PMID: 18396275) Stewart-Hutchinson PJ ... Hodzic D Experimental cell research 2008 3 4 21 Mutations in SYNE1 lead to a newly discovered form of autosomal recessive cerebellar ataxia. (PMID: 17159980) Gros-Louis F ... Rouleau GA Nature genetics 2007 Genetic association and gene expression studies suggest that genetic variants in the SYNE1 and TNF genes are related to menstrual migraine Astrid J Rodriguez-Acevedo,<sup>1</sup> Robert A Smith,<sup>1</sup> Bishakha Roy,<sup>1</sup> Heidi Sutherland,<sup>1</sup> Rod A Lea,<sup>1</sup> Alison Frith,<sup>2</sup> E Anne MacGregor,<sup>3</sup> and Lyn R Griffiths<sup>corresponding author</sup>

**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.

**TAF1C:** Okuda H, Kanai A, Ito S, Matsui H, Yokoyama A. AF4 uses the SL1 components of RNAP1 machinery to initiate MLL fusion- and AEP-dependent transcription. Nature Communications. 2015;6:8869. doi:10.1038/ncomms9869.

**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.

**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

**TBC1D24:** Mutations in TBC1D24, a gene associated with epilepsy, also cause nonsyndromic deafness DFNB86. (PMID: 24387994) Rehman AU . Friedman TB American journal of human genetics 2014 2 3 4 58 TBC1D24 mutation causes autosomal-dominant nonsyndromic hearing loss. (PMID: 24729539) Azaiez H . Smith RJ Human mutation 2014 2 3 4 58 Characterization of cDNA clones selected by the GeneMark analysis from size-fractionated cDNA libraries from human brain. (PMID: 10574461) Hirosawa M . Ohara O DNA research

**TBX21:** Zhao S, Shen W, Yu J, Wang L. TBX21 predicts prognosis of patients and drives cancer stem cell maintenance via the TBX21-IL-4 pathway in lung adenocarcinoma. Stem Cell Research & Therapy. 2018;9:89. doi:10.1186/s13287-018-0820-6.

**TCF2:** Quan X, Zhang L, Li Y, Liang C. TCF2 Attenuates FFA-Induced Damage in Islet  $\beta$ -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

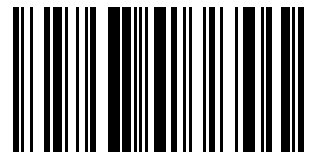
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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

**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.

#### TENM4:

**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 Xiao *Nucleic Acids Res*. 2017 Dec 15; 45(22): 12700–12714. Published online 2017 Sep 28. doi: 10.1093/nar/gkx869 PMID: PMC5727443 Jianing 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 Sun *Nucleic Acids Res*. 2017 Jan 25; 45(2): 672–684. Published online 2016 Oct 12. doi: 10.1093/nar/gkw919 PMID: 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

**TFAM:** Mitochondrial transcription factors TFA, TFB1 and TFB2: a search for DNA variants/haplotypes and the risk of cardiac hypertrophy. (PMID: 19096125) Alonso-Montes C ... Coto E *Disease markers* 2008 3 4 23 41 54 Mitochondrial transcription factor A variants and the risk of Parkinson's disease. (PMID: 19925850) Gaweda-Walerych K ... Zekanowski C *Neuroscience letters* 2010 3 23 41 54 Maternal pregestational BMI is associated with methylation of the PPARGC1A promoter in newborns. (PMID: 19148128) Gemma C ... Pirola CJ *Obesity (Silver Spring, Md.)* 2009 3 23 41 54 Structural analysis and DNA binding of the HMG domains of the human mitochondrial transcription factor A. (PMID: 19304746) Gangelhoff TA ... Churchill ME *Nucleic acids research* 2009 3 4 23 54 Mitochondrial transcription factor A (TFAM) gene variation and risk of late-onset Alzheimer's disease. (PMID: 18430995) Alvarez V ... Coto E *Journal of Alzheimer's disease : JAD* 2008

Name: Sample

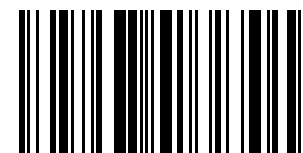
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Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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-Schimmich *J Clin Endocrinol Metab.* 2015 Aug; 100(8): E1074–E1083. Published online 2015 Jun 16. doi: 10.1210/jc.2015-1967 PMID: PMC4524993 Mijin Kim, Min Ji Jeon, Won Gu Kim, Jong Jin Lee, Jin-Sook Ryu, Eun-Jung Cho, Dae-Hyun Ko, Woochang Lee, Sail Chun, Won-Ki Min, Tae Yong Kim, Young Kee Shong, Won Bae Kim *Endocrinol Me*

**TGFB1:** Ojiaku CA, Yoo EJ, Panettieri RA. Transforming Growth Factor  $\beta$ 1 Function in Airway Remodeling and Hyperresponsiveness. The Missing Link? *American Journal of Respiratory Cell and Molecular Biology.* 2017;56(4):432-442. doi:10.1165/rcmb.2016-0307TR.

**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

**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.

**TMED10P2:** Sequence variants affecting eosinophil numbers associate with asthma and myocardial infarction. (PMID: 19198610) Gudbjartsson DF, Stefansson K *Nature genetics* 2009 A genome-wide linkage and association study of musical aptitude identifies loci containing genes related to inner ear development and neurocognitive functions. Oikkonen J1, Huang Y2, Onkamo P3, Ukkola-Vuoti L4, Raijas P5, Karma K5, Vieland VJ2, Järvelä I4.

**TMEM16D:** FLJ10261 gene, located within the CCND1-EMS1 locus on human chromosome 11q13, encodes the eight-transmembrane protein homologous to C12orf3, C11orf25 and FLJ34272 gene products. (PMID: 12739008) Katoh M, Katoh M *International journal of oncology* 2003 23 4 58 Structure and function of TMEM16 proteins (anoctamins). (PMID: 24692353) Pedemonte N, Galletta LJ *Physiological reviews* 2014 23 58 Anoctamins are a family of Ca<sup>2+</sup>-activated Cl<sup>-</sup> channels. (PMID: 22946059) Tian Y, Kunzelmann K *Journa*

**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

**TMEM182:** Kim YK, Kim Y, Hwang MY, et al. Identification of a genetic variant at 2q12.1 associated with blood pressure in East-Asians by genome-wide scan including gene-environment interactions. *BMC Medical Genetics.* 2014;15:65. doi:10.1186/1471-2350-15-65.

**TMEM216:** Joubert syndrome 2 (JBTS2) in Ashkenazi Jews is associated with a TMEM216 mutation. Edvardson S1, Shaag A, Zenvirt S, Erlich Y, Hannon GJ, Shanske AL, Gomori JM, Ekstein J, Elpeleg O. Mutations in TMEM216 perturb ciliogenesis and cause Joubert, Meckel and related syndromes. Valente EM1, Logan CV, Mougou-Zerelli S, Lee JH, Silhavy JL, Brancati F, Iannicelli M, Travaglini L, Romani S, Illi B, Adams M, Szymanska K, Mazzotta A, Lee JE, Tolentino JC, Swistun D, Salpietro CD, Fede C, Gabriel S, Ru

**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

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**TMLHE:** Analysis of the chromosome X exome in patients with autism spectrum disorders identified novel candidate genes, including TMLHE. Translational psychiatry Nava C ... Depienne C (PMID:23092983) Gene 3 , Protein 4 , Disorder 69 , GeneVariant 108 2012 48 Use of array CGH to detect exonic copy number variants throughout the genome in autism families detects a novel deletion in TMLHE. Human molecular genetics Celestino-Soper PB ... Beaudet AL (PMID:21865298) Gene 3 , Protein 4 , Disorder 69 , GeneVariant 108 2011 59 Molecular and Biochemical Characterization of Rat epsilon -N-Trimethyllysine Hydroxylase, the First Enzyme of Carnitine Biosynthesis. The Journal of biological chemistry Vaz FM ... Wanders RJ (PMID:11431483) Gene 2 3 , Protein 4 , Interaction 95 2001 16 A common X-linked inborn error of carnitine biosynthesis may be a risk factor for nondysmorphic autism. Proceedings of the National Academy of Sciences of the United States of America Celestino-Soper PB ... Beaudet AL (PMID:22566635) Gene 3 , Disorder 69 , GeneVariant 108 2012 62 Functional analysis of TMLH variants and definition of domains required for catalytic activity and mitochondrial targeting. Journal of cellular physiology Monfregola J ... Ursini MV (PMID:15754339) Protein 4 , Gene 3 21 2005 5 Comparative Analyses of Copy-Number Variation in Autism Spectrum Disorder and Schizophrenia Reveal Etiological Overlap and Biological Insights. Cell reports Kushima I ... Ozaki N (PMID:30208311) Disorder 69 , GeneVariant 108 2018 91 Improvement of regressive autism symptoms in a child with TMLHE deficiency following carnitine supplementation. American journal of medical genetics. Part A Ziats MN ... Schaaf CP (PMID:25943046) Disorder 69 , GeneVariant 108 2015 15 Functional characterization of the TMLH gene: promoter analysis, in situ hybridization, identification and mapping of alternative splicing variants. Gene Monfregola J ... Ursini MV (PMID:17408883) Gene 3 , Protein 4 2007 3 The DNA sequence of the human X chromosome. Nature Ross MT ... Bentley DR (PMID:15772651) Gene 3 , Protein 4 2005 451 Complete sequencing and characterization of 21,243 full-length human cDNAs. Nature genetics Ota T ... Sugano S (PMID:14702039)

**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

**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 $\alpha$  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.

**TMTC1:** Larsen ISB, Narimatsu Y, Joshi HJ, et al. Discovery of an O-mannosylation pathway selectively serving cadherins and protocadherins. Proceedings of the National Academy of Sciences of the United States of America. 2017;114(42):11163-11168. doi:10.1073/pnas

**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-

Name: Sample

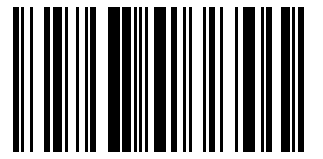
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

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 biologiiia 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



Name: Sample

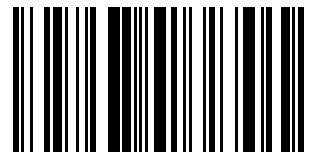
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

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

**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.

Name: Sample

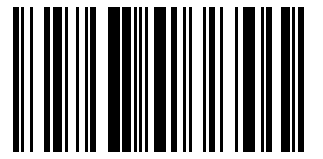
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**TOMM40:** Hippocampal atrophy as a quantitative trait in a genome-wide association study identifying novel susceptibility genes for Alzheimer's disease. (PMID: 19668339) Potkin SG . Alzheimer's Disease Neuroimaging Initiative PloS one 2009 3 23 45 58  
Dissection of the mitochondrial import and assembly pathway for human Tom40. (PMID: 15644312) Humphries AD . Ryan MT The Journal of biological chemistry 2005 2 3 4 58  
Genetic identity and differential expression of p38.5 (Haymaker) in human malignant and

**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.

**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.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**TREM2:** Jay TR, von Saucken VE, Landreth GE. TREM2 in Neurodegenerative Diseases. *Molecular Neurodegeneration*. 2017;12:56. doi:10.1186/s13024-017-0197-5.

**TRIM26:** Nakagawa T, Hosogane M, Nakagawa M, Morohoshi A, Funayama R, Nakayama K. Transforming Growth Factor  $\beta$ -Induced Proliferative Arrest Mediated by TRIM26-Dependent TAF7 Degradation and Its Antagonism by MYC. *Molecular and Cellular Biology*. 2018.

**TRIM33:** Xue J, Chen Y, Wu Y, et al. Tumour suppressor TRIM33 targets nuclear  $\beta$ -catenin degradation. *Nature communications*. 2015;6:6156. doi:10.1038/ncomms7156.

**TRIM66:** Chen Y, Guo Y, Yang H, et al. TRIM66 overexpression 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.

**TSC1:** Missense mutations to the TSC1 gene cause tuberous sclerosis complex. (PMID: 18830229) Nellist M ... Halley D *European journal of human genetics : EJHG* 2009 3 4 21 69 Mutational analysis of the TSC1 and TSC2 genes in a diagnostic setting: genotype-phenotype correlations and comparison of diagnostic DNA techniques in Tuberous Sclerosis Complex. (PMID: 15798777) Sancak O ... van den Ouweland A *European journal of human genetics : EJHG* 2005 3 21 39 69 Mutation analysis of the TSC1 and TSC2 genes in Japanese patients with pulmonary lymphangiomyomatosis. (PMID: 11829138) Sato T ... Hino O *Journal of human genetics* 2002 3 4 21 69 Analysis of all exons of TSC1 and TSC2 genes for germline mutations in Japanese patients with tuberous sclerosis: report of 10 mutations. (PMID: 10607950) Yamashita Y ... Hino O *American journal of medical genetics* 2000 3 4 21 69 Mutational analysis of TSC1 and TSC2 genes in Japanese patients with tuberous sclerosis complex. (PMID: 10570911) Zhang H ... Takeshita K *Journal of human genetics* 1999

**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.

**TSNARE1:** Patrick Sleiman, Dai Wang, Joseph Glessner, Dexter Hadley, Raquel E. Gur, Nadine Cohen, Qingqin Li, Hakon Hakonarson, the Janssen-CHOP Neuropsychiatric Genomics Working Group *Sci Rep*. 2013; 3: 3075. Published online 2013 Oct 29. doi: 10.1038/srep03075 PMID: PMC3810676 Menachem Fromer, Panos Roussos, Solveig K Sieberts, Jessica S Johnson, David H Kavanagh, Thanneer M Perumal, Douglas M Ruderfer, Edwin C Oh, Aaron Topol, Hardik R Shah, Lambertus L Klei, Robin Kramer, Dalila Pinto, Zeynep H Gü

**TTRAP:** Vilotti S, Biagioli M, Foti R, et al. The PML nuclear bodies-associated protein TTRAP regulates ribosome biogenesis in nucleolar cavities upon Proteasome 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

**TUSC1:** Zhihong Shan, Abbas Shakoory, Sohrab Bodaghi, Paul Goldsmith, Jen Jin, Jonathan S. Wiest *PLoS One*. 2013; 8(6): e66114. Published online 2013 Jun 11. doi: 10.1371/journal.pone.0066114 PMID: PMC3679066 Youichi Sato, Chise Hasegawa, Atsushi Tajima, Shiari Nozawa, Miki Yoshiike, Eitetsue Koh, Jiro Kanaya, Mikio Namiki, Kiyomi Matsumiya, Akira Tsujimura, Kiyoshi Komatsu, Naoki Itoh, Jiro Eguchi, Aiko Yamauchi, Teruaki Iwamoto *J Assist Reprod Genet*. 2018 Feb; 35(2): 257-263. Published online 2017 Oc

**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

Name: Sample

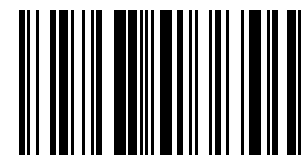
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**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

**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 Kania *eLife.* 2015; 4: e10841. Published online 2015 Dec 3. doi: 10.7554/eLife.10841 PMCID: PMC4764565 Quan Li, Bai-Ling Wang, Fu-Rong

**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:** Doms 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.

**UTRN:** Adhesion-dependent tyrosine phosphorylation of (beta)-dystroglycan regulates its interaction with utrophin. (PMID: 10769203) James M . Winder SJ *Journal of cell science* 2000 3 4 23 56 Crystal structure of the actin-binding region of utrophin reveals a head-to-tail dimer. (PMID: 10647184) Keep NH . Kendrick-Jones J *Structure (London, England : 1993)* 1999 3 4 23 56 Up71 and up140, two novel transcripts of utrophin that are homologues of short forms of dystrophin. (PMID: 10369873) Wilson J . E

**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*

**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*

Name: Sample

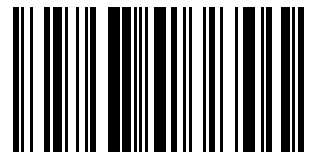
Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

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 metabolisme 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.



Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



(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

**VEGFR2:** Zhou HJ, Xu Z, Wang Z, Zhang H, Simons M, Min W. SUMOylation of VEGFR2 regulates its intracellular trafficking and pathological angiogenesis. Nature Communications. 2018;9:3303. doi:10.1038/s41467-018-05812-2. Association of the VEGFR2 single nucleotide polymorphism rs2305948 with glioma risk Shushu Sun et al. Medicine (Baltimore). 2022.

**VIPR2:** 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 22 40 Structure of the human VIPR2 gene for vasoactive intestinal peptide receptor type 2. (PMID: 10481065) Lutz EM ... Harmar AJ (FEBS letters 1999) 3 4 22 Chromosomal localization in mouse and human of the vasoactive intestinal peptide receptor type 2 gene: a possible contributor to the holoprosencephaly 3 phenotype. (PMID: 8938447) Mackay M ... Harmar AJ (Genomics 1996) 3 4 22 Molecular cloning and functional characterization of a human VIP receptor from SUP-T1 lymphoblasts. (PMID: 7811244) Svoboda M ... Robberecht P (Biochemical and biophysical research communications 1994) 2 3 4 Assessment of a polymorphism of SDK1 with hypertension in Japanese Individuals. (PMID: 19851296) Oguri M ... Yamada Y (American journal of hypertension 2010)

**VRK2:** Noriyuki Hirata, Futoshi Suizu, Mami Matsuda-Lennikov, Tsutomu Tanaka, Tatsuma Edamura, Satoko Ishigaki, Thoria Donia, Pathrapol Lithanatudom, Chikashi Obuse, Toshihiko Iwanaga, Masayuki Noguchi Oncogene. 2018; 37(40): 5367–5386. Published online 2018 Jun 5. doi: 10.1038/s41388-018-0330-0 PMID: PMC6172193 Sangjune Kim, Do-Young Park, Dohyun Lee, Wanil Kim, Young-Hun Jeong, Juhyun Lee, Sung-Kee Chung, Hyunjung Ha, Bo-Hwa Choi, Kyong-Tai Kim Mol Cell Biol. 2014 Feb.

**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 (Baltimore)

**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. Lo PLoS 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.2014.00183 PMID: 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

Name: Sample

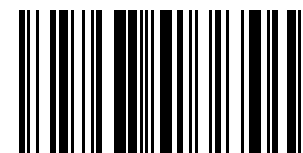
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Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



Sample

**WFS1:** Yasufumi Sakakibara, Michiko Sekiya, Naoki Fujisaki, Xiuming Quan, Koichi M. Iijima *PLoS Genet.* 2018 Jan; 14(1): e1007196. Published online 2018 Jan 22. doi: 10.1371/journal.pgen.1007196 **PMCID:** PMC5794194 Triin Tekko, Triin Laksperre, Anni Allikalt, Jaanus End, Karl Rene Kõlvart, Toomas Jagomäe, Anton Terasmaa, Mari-Anne Philips, Tanel Visnapuu, Fred Väärtnõu, Scott F. Gilbert, Ago Rincken, Eero Vasar, Kersti Lilleväli *PLoS One.* 2017; 12(3): e0172825. Published online 2017 Mar 7.

**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 Shi *Mol Med Rep.* 2017 Dec; 16(6): 8685–8690. Published online 2017 Oct 4. doi: 10.3892/mmr.2017.7708 **PMCID:** PMC5779946 Upal Basu-Roy, N. Sumru Bayin, Kirk Rattanakorn, Eugenia Han, Dimitris G. Placantonakis, Alka Mansukhani, Claudio Basilico *Nat Commun.* 2015; 6: 6411. Published online 2015 Apr 2. doi: 10.1038/ncomms7411 **PMCI**

**WVOX:** Schrock MS, Batar B, Lee J, et al. Wwox–Brca1 interaction: role in DNA repair pathway choice. *Oncogene.* 2017;36(16):2215-2227. doi:10.1038/onc.2016.389.

**XKR6:** Young Bin Joo, Jiwoo Lim, Betty P. Tsao, Swapan K. Nath, Kwangwoo Kim, Sang-Cheol Bae *Sci Rep.* 2018; 8: 9962. Published online 2018 Jul 2. doi: 10.1038/s41598-018-28128-z **Correction in:** *Sci Rep.* 2018; 8: 11713. **PMCID:** PMC6028392 Prithvi 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 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

**XPO1:** Molecular cloning and cell cycle-dependent expression of mammalian CRM1, a protein involved in nuclear export of proteins. (PMID: 9368044) Kudo N . Horinouchi *S The Journal of biological chemistry* 1997 2 3 4 23 56 **CRM1-mediated nuclear export is required for 26 S proteasome-dependent degradation of the TRIP-Br2 proto-oncoprotein.** (PMID: 18316374) Cheong JK . Hsu *SI The Journal of biological chemistry* 2008 3 4 23 56 **Kinetic and molecular analysis of nuclear export factor CRM1 association wit**

**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.

**ZBED9:** Machiela MJ, Ho BM, Fisher VA, Hua X, Chanock SJ. Limited evidence that cancer susceptibility regions are preferential targets for somatic mutation. *Genome Biology.* 2015;16(1):193. doi:10.1186/s13059-015-0755-5.

Name: Sample

Age:

Gender: M

Report Date: 15/05/2025

Prescriber:

Health Insurance:



**ZBTB46:** Yu Wang, He-Ying Sun, Sandeep Kumar, Maria del Mar Puerta, Hanjoong Jo, Amir RezvanLab Invest. 2019 Mar; 99(3): 305–318. Published online 2018 Jun 8. doi: 10.1038/s41374-018-0060-5PMCID: PMC6286701Miche 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. SchrijversPLOS One. 2017; 12(1): e0169608. Published online 2017 Jan 6. doi: 10.1371/journal.pone.0169608PMCID: PMC5218565Ansuman T. Satpath

**ZEB2:** Lai Man Natalie Wu, Jincheng Wang, Andrea Conidi, Chuntao Zhao, Haibo Wang, Zachary Ford, Liguozhang, Christiane Zweier, Brian G. Ayee, Patrice Maurel, An Zwijsen, Jonah R. Chan, Michael P. Jankowski, Danny Huylebroeck, Q. Richard LuNat Neurosci. 2016 Aug; 19(8): 1060–1072. Published online 2016 Jun 13. doi: 10.1038/nn.4322 PMCID: PMC4961522 Charlotte L. Scott, Bieke Soen, Liesbet Martens, Nicolas Skrypek, Wouter Saelens, Joachim Taminou, Gillian Blancke, Gert Van Isterdael.

**ZMIZ1:** Pinnell N, Yan R, Cho HJ, et al. The PIAS-like coactivator Zmiz1 is a direct and selective cofactor of Notch1 in T-cell development and leukemia. Immunity. 2015;43(5):870-883. doi:10.1016/j.immuni.2015.10.007.

**ZNF285B:**

**ZNF385B:**

**ZNF536:** Zhen Qin, Fangli Ren, Xialian Xu, Yongming Ren, Hongge Li, Yinyin Wang, Yonggong Zhai, Zhijie ChangMol Cell Biol. 2009 Jul; 29(13): 3633–3643. Published online 2009 Apr 27. doi: 10.1128/MCB.00362-09 PMCID: PMC2698762Eugene Lin, Po-Hsiu Kuo, Yu-Li Liu, Younger W.-Y. Yu, Albert C. Yang, Shih-Jen TsaiFront 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.

**ZNF615:**

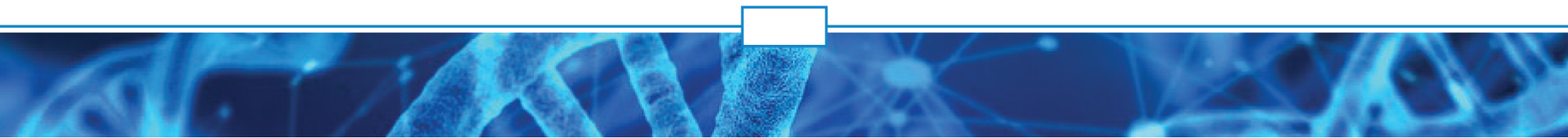
**ZNF804A:** Zhou Y, Dong F, Lanz TA, et al. Interactome analysis reveals ZNF804A, a schizophrenia risk gene, as a novel component of protein translational machinery critical for embryonic neurodevelopment. Molecular Psychiatry. 2018;23(4):952-962. doi:10.1038/mp.2017

**ZNF804B:** Novel associations for hypothyroidism include known autoimmune risk loci. (PMID: 22493691) Eriksson N ... Do CB PloS one 2012 3 40 A genome-wide association study on common SNPs and rare CNVs in anorexia nervosa. (PMID: 21079607) Wang K ... Price Foundation Collaborative Group Molecular psychiatry 2011 3 40 Genome-wide association study of anthropometric traits and evidence of interactions with age and study year in Filipino women. (PMID: 20966902) Croteau-Chonka DC ... Mohlke KL Obesity (Silver Spring, Md.) 2011 3 40 A Japanese-specific allele in the GALNT11 gene. (PMID: 20547088) Yuasa I ... Henke J Legal medicine (Tokyo, Japan) 2010 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

**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 Che

**ZNFX1:** Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins in vitro. (PMID: 10718198) Nagase T . Ohara O DNA research : an international journal for rapid publication of reports on genes and genomes 2000 2 3 4 56 Complete sequencing and characterization of 21,243 full-length human cDNAs. (PMID: 14702039) Ota T . Sugano S Nature genetics 2004 3 4 56 The DNA sequence and comparative analysis of hu

**ZNRD1:**





**FullDNA**

[www.FullDNA.com](http://www.FullDNA.com)