

## Psychedelics Genetic Test

### REPORT SUMMARY

The HaluGen Psychedelics Genetic Test is a pharmacogenomic test to help identify how an individual's DNA profile can affect their response to hallucinogenic drugs. The information contained in this report is based on research related to specific genetic polymorphisms and their influence on pharmacodynamics, pharmacokinetics and mental health risk factors for psychedelics use.

#### PHARMACODYNAMIC GENES

Genes that influence pharmacodynamics can alter gene receptors resulting in different responses to drugs such as sensitivity and adverse side effects. Your report includes a genetic marker for serotonin receptor density which can influence sensitivity to classical psychedelics and SSRIs.

Gene	Genotype	Result	Description
HTR2A	C/T	Normal Sensitivity	The HTR2A gene influences serotonin receptor density.

#### PHARMACOKINETIC GENES

Genes that influence pharmacokinetics can alter drug metabolism resulting in variability in drug blood concentration levels and therapeutic response. Your report includes metabolism genes for ketamine, LSD, MDMA and ayahuasca.

Gene	Genotype/Phenotype	Result	Description
CYP2B6	*1/*1	Normal Metabolism	The CYP2B6 gene is responsible for ketamine metabolism.
CYP2D6	Poor Metabolizer	Very Slow Metabolism	The CYP2D6 gene is responsible for LSD, MDMA and ayahuasca metabolism.

#### MENTAL HEALTH RISK GENES

Genes can influence short- and long-term risk factors with psychedelics drug use. Your report includes genetic risk markers for mental health effects.

Gene	Genotype	Result	Description
C4A	4 copies	Increased Risk	The C4A gene is a mental health risk factor.
NRG1	C/C	Normal Risk	The NRG1 gene is a mental health risk factor.
DISC1	T/T	Increased Risk	The DISC1 gene is a mental health risk factor.

# Psychedelics Genetic Test

## HTR2A GENE · SEROTONIN SENSITIVITY

### Description

The way your body responds to classical psychedelics such as psilocybin, LSD and DMT, is influenced by the HTR2A gene. This gene influences the baseline expression of the 5-HTR2A serotonin receptor, which is activated by both serotonin and psychedelic drugs. This binding activation releases neurotransmitters in the brain which can induce potential hallucinations and other mental effects.

### Genotype Result

**HTR2A C/C**

### What do my results mean?

Approximately 20% of people carry an HTR2A genetic variant which can increase serotonin receptor density, potentially making them more susceptible to stronger hallucinogenic effects. These individuals should be more cautious when considering classical psychedelic therapies.

### Psychedelics Sensitivity

**Reduced** ⬇️

### How do I compare?

HTR2A Genotype	HTR2A Serotonin Receptors
C/C	Reduced
C/T	Normal
T/T	Increased

Caucasians



- Reduced (34%)
- Normal (47%)
- Increased (18%)

East Asians



- Reduced (23%)
- Normal (54%)
- Increased (23%)

Indians



- Reduced (22%)
- Normal (54%)
- Increased (24%)

### How do I respond to SSRIs?

Selective Serotonin Reuptake Inhibitors (SSRIs) are a common treatment for depression and anxiety. They are thought to increase serotonin levels in the brain by blocking the reabsorption ("reuptake") of serotonin. Studies have shown that individuals with reduced serotonin receptor density (HTR2A C/C genotype) are more prone to adverse drug reactions (ADRs) when taking SSRIs.

### SSRI Sensitivity

**Increased**

## Psychedelics Genetic Test

### CYP2B6 GENE · KETAMINE METABOLISM

#### Description

The way your body metabolizes ketamine, a fast-acting anesthetic with hallucinogenic properties, is influenced by the CYP2B6 gene. This gene encodes a liver enzyme that helps metabolize ketamine in your bloodstream. 10–20% of people carry the CYP2B6\*6 genetic variant which causes them to metabolize ketamine up to 2x to 3x slower than normal.

#### Genotype Result

**CYP2B6 \*6/\*6**

#### What do my results mean?

'Slow metabolizers' should be more cautious when being dosed with ketamine, as they can experience an increased duration, intensity of effect and adverse drug reactions, especially when taking ketamine in intravenous or subcutaneous form.

#### Ketamine Metabolism

**Very Slow** ⚠

#### How do I compare?

##### CYP2B6 Genotype

\*1/\*1  
\*1/\*6  
\*6/\*6

##### CYP2B6 Metabolism Status

Normal  
Slow  
Very Slow

##### Caucasians



● Normal (48%)  
● Slow (43%)  
● Very Slow (9%)

##### Africans



● Normal (32%)  
● Slow (46%)  
● Very Slow (22%)

##### East Asians



● Normal (46%)  
● Slow (41%)  
● Very Slow (13%)

## Psychedelics Genetic Test

### CYP2D6 GENE · LSD, MDMA & AYAHUASCA METABOLISM

#### Description

The way your body metabolizes LSD, MDMA and ayahuasca, is influenced by the CYP2D6 gene. This gene encodes a liver enzyme that helps metabolize these drugs in your bloodstream. 5–10% of people carry the CYP2D6 genetic variant which causes them to metabolize LSD, MDMA and ayahuasca up to 2x slower than normal.

#### Phenotype Result

Poor Metabolizer

#### What do my results mean?

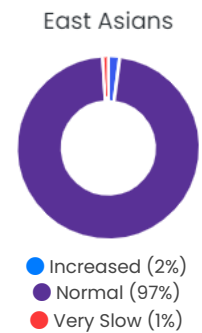
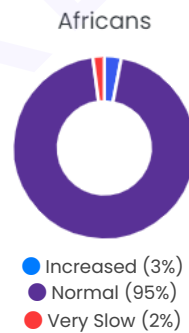
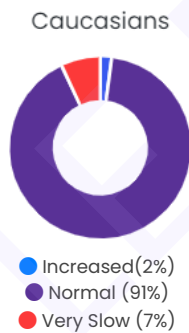
Individuals with the 'poor metabolizer' phenotype should be more cautious when being dosed with LSD, MDMA and ayahuasca, as they can experience an increased duration, intensity of effect and adverse drug reactions when taken in oral form.

#### Metabolism

Very Slow ⚠

#### How do I compare?

CYP2D6 Phenotype	CYP2D6 Metabolism Status
Ultrarapid	Increased
Intermediate / Normal	Normal
Poor	Very Slow



# Psychedelics Genetic Test

## C4A GENE COPY NUMBER VARIATION · MENTAL HEALTH RISK

### Description

The C4A gene expresses a protein that is responsible for synaptic pruning in the brain. This is a normal process by which extra synapses, starting in childhood and adolescence, are eliminated to make way for more complex synapses in adulthood. An individual can have different C4A gene copy number variations (CNV), typically from 0 to 5 copies.

### CNV Result

**4 copies**

### What do my results mean?

Having an increased number of C4A gene copies (4 or 5) causes more C4A protein expression that is responsible for synaptic pruning. It is believed that increased disorderly synaptic pruning can be a contributing factor to a higher risk of mental health disorders such as psychosis, bipolar and schizophrenia.

### Risk

**Increased** 

### How do I compare?

C4A CNV	Mental Health Risk
0-1	Normal
2-3	Normal
4-5	Increased

Caucasians



● 0-1 Copies (22%)  
● 2-3 Copies (75%)  
● 4-5 Copies (3%)

East Asians



● 0-1 Copies (7%)  
● 2-3 Copies (89%)  
● 4-5 Copies (4%)

## Psychedelics Genetic Test

### NRG1 GENE · MENTAL HEALTH RISK

#### Description

The neuregulin 1 (NRG1) gene expresses NRG1 proteins that stimulates the EGFR receptors which promotes neuron cell development as well as myelin production. NRG1 plays an important role in synaptic plasticity of the brain, which influences short-term learning and long-term memory.

#### Genotype Result

**NRG1 C/T**

#### What do my results mean?

Having the NRG1 T/T genotype can cause an over-expression of NRG1 proteins leading to reduced synaptic plasticity and disruption in neuron connections in the brain. The T/T genotype has been linked as a risk factor for mental health disorders such as psychosis, bipolar and schizophrenia.

**Risk**

**Normal**

#### How do I compare?

NRG1 Genotype	Mental Health Risk
C/C	Normal
C/T	Normal
T/T	Increased

Caucasians



- C/C Normal (37%)
- C/T Normal (48%)
- T/T Increased (15%)

Africans



- C/C Normal (40%)
- C/T Normal (46%)
- T/T Increased (14%)

# Psychedelics Genetic Test

## DISC1 GENE · MENTAL HEALTH RISK

### Description

The disrupted in schizophrenia (DISC1) gene expresses DISC1 proteins that are involved in important processes that regulate nervous system and brain development. It is a well-established genetic risk factor amongst different populations and ethnicities for psychiatric disorders.

### Genotype Result

**DISC1 T/T**

### What do my results mean?

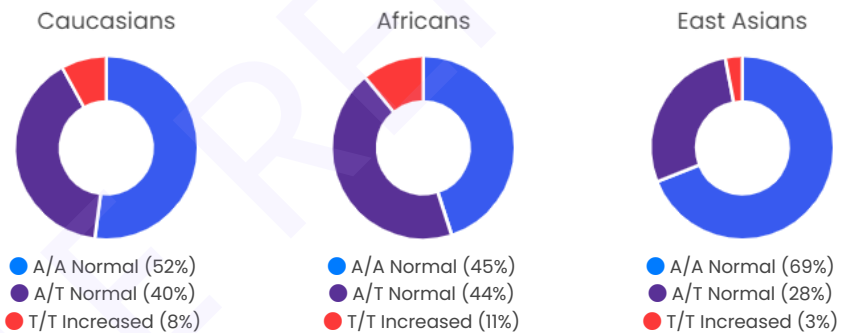
Having the DISC1 T/T genotype has been shown to increase the risk for mental health disorders such as psychosis, bipolar and schizophrenia.

### Risk

**Increased** ⬆️

### How do I compare?

DISC1 Genotype	Mental Health Risk
A/T	Normal
A/T	Normal
T/T	Increased



### DISCLAIMER

This report is for informational purposes only and does not and is not intended to convey medical advice and does not constitute the practice of medicine. You should not rely on this information as a substitute for, nor does it replace, professional medical advice, diagnosis, or treatment. HaluGen is not responsible for any actions or inaction on a user's part based on the information that is presented in this report.

The use of any psychedelic drug can come with potential health risks and legal consequences. All individuals should do their own research as well as consult with a healthcare professional prior to considering the use of any psychedelic drug to ensure the appropriateness and legality of any psychedelic therapy within your jurisdiction.