SelfDecode™

AHCY (Methylation)

Biohacker Report

REPORT CATEGORIES

DETOX

NUTRITION

Sample Client

Report date: 29 July 2025

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Personal information

NAME

Sample Client

SEX AT BIRTH

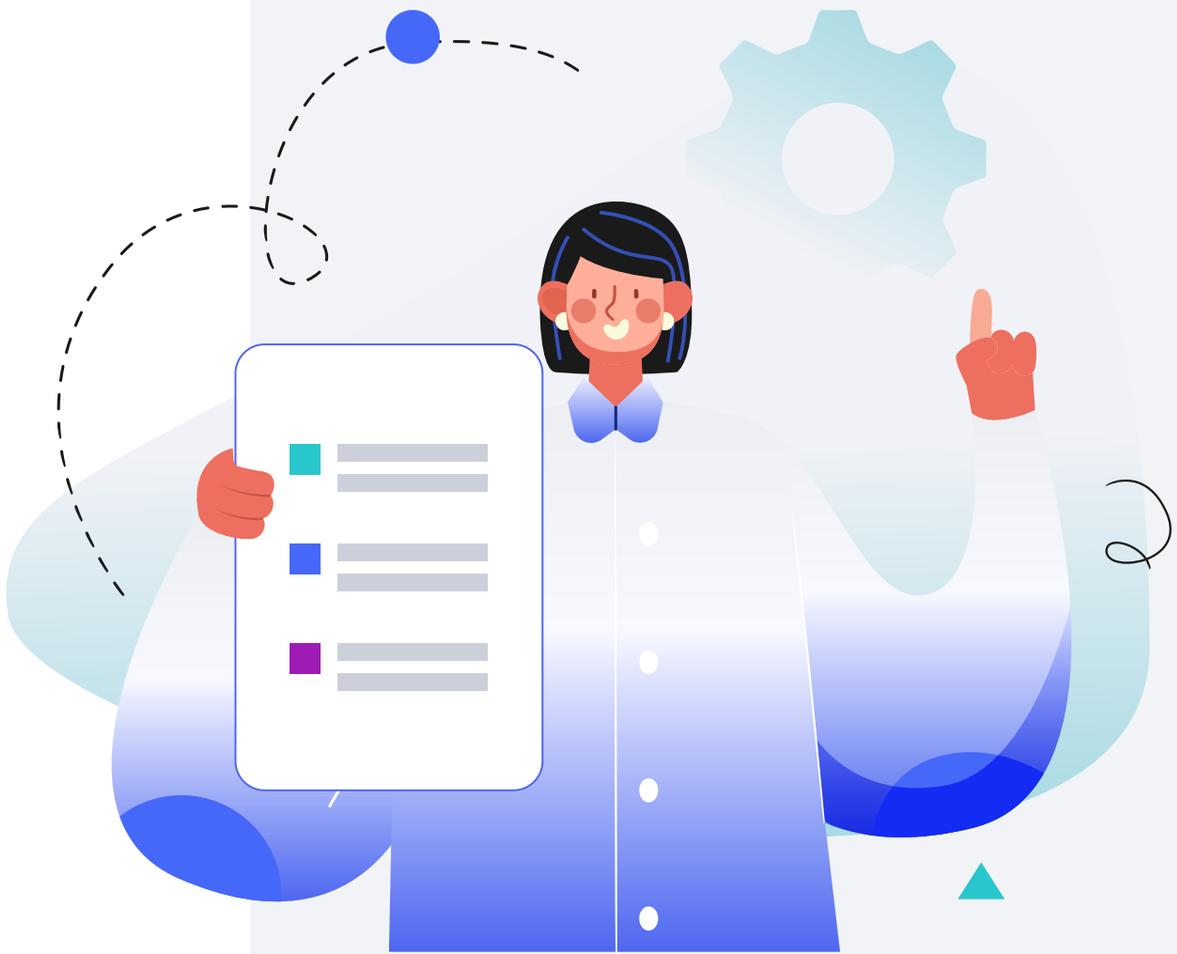
Female

HEIGHT

5ft 9" 175.0cm

WEIGHT

165lb 75.0kg



DISCLAIMER

This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.

Introduction

Methylation is when a methyl group is transferred from one compound to another. Methyl groups are switches that turn on or off genes based on environmental cues. This is called *epigenetics*.

Methyl groups also signal which hormones, brain chemicals, and amino acids need to be broken down and removed, maintaining a healthy balance in the body. Issues with the methylation cycle play a role in heart health, mental health, fertility problems, birth defects, cancer, and more [R, R, R].

The methylation cycle uses folate to produce the active vitamin methylfolate (5-methyl THF). This step is crucial for turning harmful homocysteine into methionine [R].

In the next step, methionine obtained via these pathways creates SAM-e (S-adenosyl-methionine), a compound that provides a methyl group for methylation [R, R].

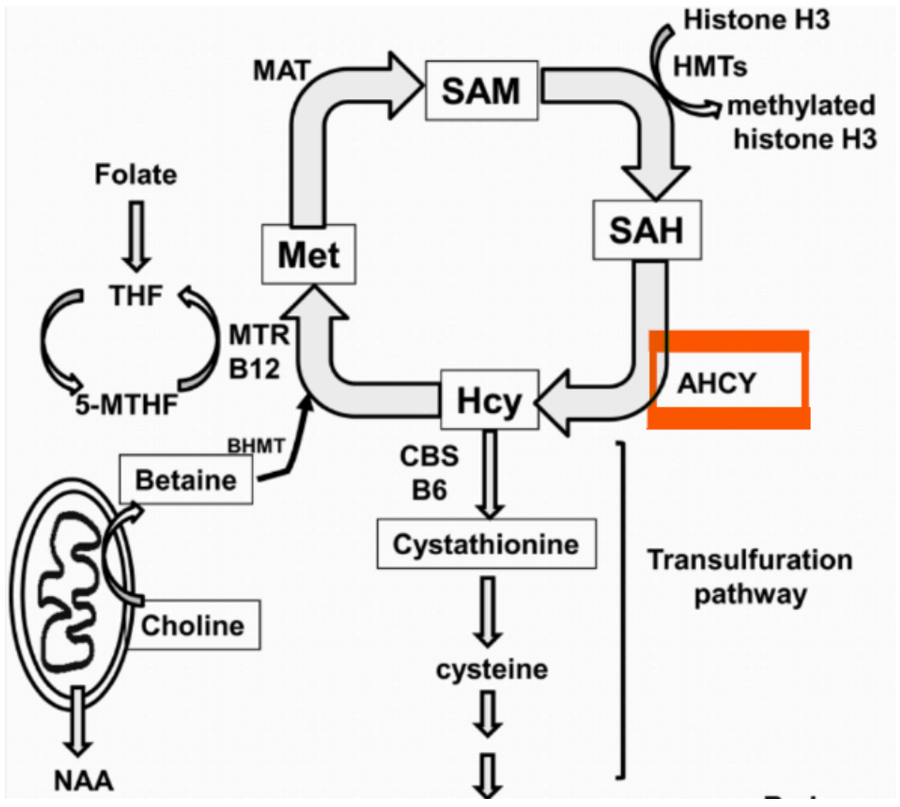


Image source: ResearchGate

The *AHCY* gene helps make the **SAHH** (S-adenosylhomocysteine hydrolase) enzyme. This converts S-adenosylhomocysteine to adenosine and homocysteine. This reaction is a crucial step in the methylation cycle [R].

AHCY Genetics

PERSONALIZED TO GENES

Based on the genetic variants that we looked at, you may be predisposed to a typical AHCY activity. However, the relevance of these variants for human health is still unclear. Also, keep in mind that other genetic and environmental factors can influence your AHCY activity.

Researchers have identified two rare *AHCY* gene variants that may change the enzyme structure and reduce its activity: **rs41301825-T** and **rs13043752-A** [R].

However, the research on AHCY variants is scarce, so we can't be sure about their potential effects on methylation and human health. One paper has linked rs13043752 to venous thrombosis, independent of homocysteine levels [R].

People with rare AHCY mutations may have severe SAHH deficiency. **This report is not looking at such mutations and is not diagnostic of any health condition.**

TYPICAL ACTIVITY

Likely typical AHCY activity based on the genetic variants we looked at

95%

OF USERS SHARE THE SAME SCORE

You have the same genetic predisposition as **95% of our users.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
AHCY	rs13043752	GG
AHCY	rs41301825	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.