SelfDecode

TMEM18 (Weight)

Gene Report

REPORT CATEGORY

WEIGHT & BODY FAT

Sample Client

Report date: 15 January 2026

Powered by omicsedge

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Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

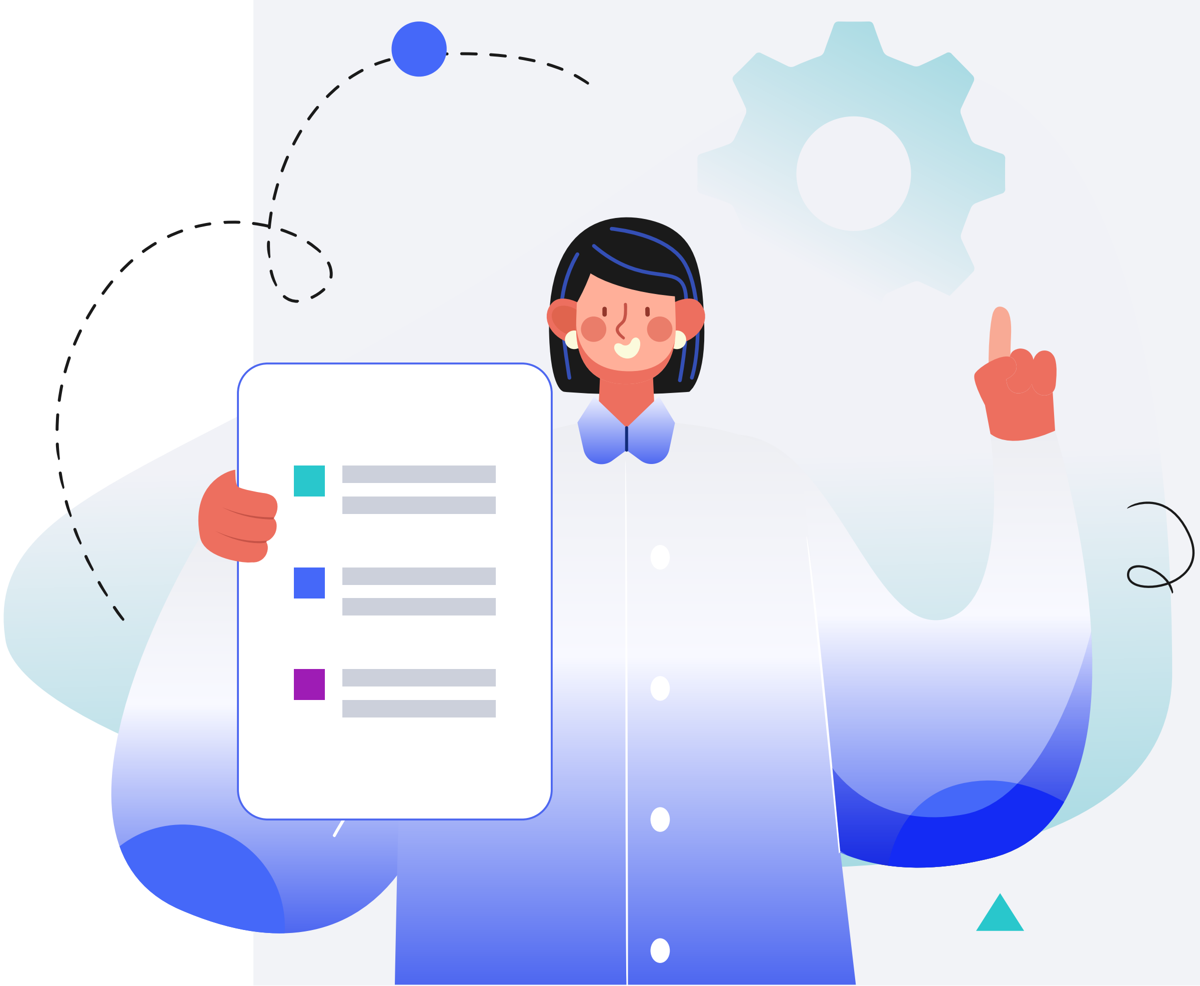
5ft 5" 165cm

WEIGHT

137lb 62kg

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.



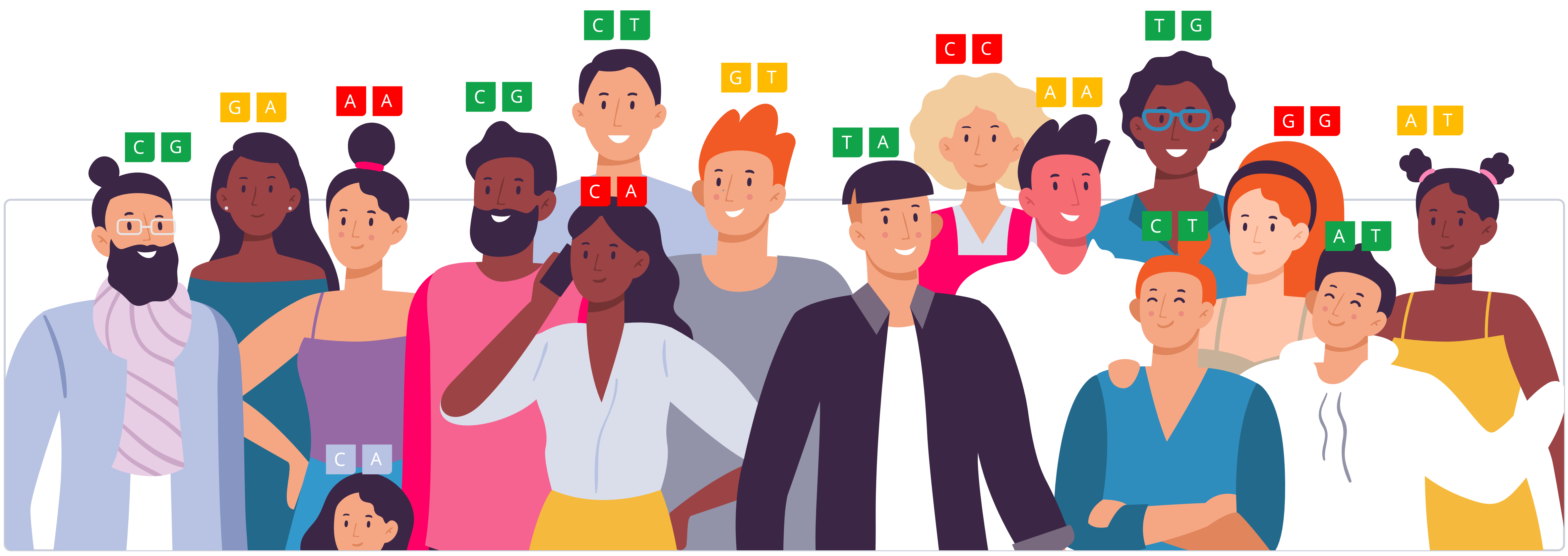
How this works

**Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.**

Similarly, our Trait Reports look at how your DNA influences your traits.

Your DNA is like an instruction manual — it contains a lot of information.
You can think of it as a blueprint for your body.

Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



In total, we analyze up to 83 million genetic variants.

We use artificial intelligence and machine learning to analyze all this information. We then summarize your results as a risk score or display it on a gauge.

When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:

Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

Your risk is also displayed as a percentile. This will tell you how your risks compare to our sample population. The lower your percentile number, the lower your risk. The "50th percentile" would be an average risk.

Similarly, the gauge tells you your relative risk score compared to our sample population, or it indicates a specific trait or haplotype you are more likely to have based on your genetic variants.

When applicable, we also list top evidence-based recommendations that may help lower your risk. The focus is on recommendations that may be of benefit to you, based on your genetics.

Our recommendations come in four categories: lifestyle, diet, supplements and drugs.
The following icons tell you which category a recommendation falls into:

Our team of scientists also ranks each recommendation.
We rank based on impact and the strength of evidence in the medical literature.

Impact shows how strongly a recommendation will affect your health in a certain area.
Evidence is how much scientific support there is for the recommendation. Rankings are from 1 to 5 (low to high):

Impact

Impact scores range from 1-5. These scores reflect how much of an effect each recommendation can have. An impact score of 5 predicts the biggest effect.

When a recommendation affects something we can measure, we use those measurements to assign the impact score. For example, a recommendation that decreases cholesterol by 20% will have a higher impact score than one that decreases it by 5%.

Some recommendations affect things that we cannot directly measure, like stress or mood. For these, the impact score is based on how well they work relative to other recommendations and standard treatments. The best ones get the highest scores.

If there is a lot of research that shows a recommendation works especially well for your genotype, the impact score gets increased.

Recommendation Evidence

5 / 5

Recommendations that are considered effective and generally recommended by experts and medical bodies.

4 / 5

Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.

3 / 5

Recommendations that are considered possibly effective and have many studies supporting them

2 / 5

Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.

1 / 5

Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.

0 / 5

No evidence in humans.

Genotype-specific Evidence

High-quality

Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, afew large clinical trials, or a meta-analysis).

Medium-quality

Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).

Low-quality

Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).

Indirect

A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).

In theory

A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- Genetics doesn't play a considerable role in a condition or a trait.
- There is not enough research available to estimate a genetic predisposition.
- There are technical limitations to estimating or presenting a genetic predisposition.
- The topic is sensitive, and a genetic predisposition should only be estimated and presented by a healthcare professional.

Introduction

TMEM18, short for *transmembrane protein 18*, is a gene whose exact role is still unknown. Over the past decade, however, there's been almost a multitude of studies that found a link between this gene and body weight and obesity [R, R, R, R].

TMEM18 seems to have a relatively large impact on body weight among all these genes. In some studies, it's second only to *FTO* (*fat mass and obesity-associated gene*) [R, R, R, R, R, R, R].

Scientists think that *TMEM18* may affect either of the following:

- Other genes linked to appetite and energy balance in the brain [R]
- Fat accumulation in fat tissue [R, R]
- Insulin and glucagon metabolism [R]

TMEM18 Genetics

There are 4 SNPs in the *TMEM18* gene that are often inherited together and that have all been linked to obesity in many different studies. In all cases, the variant associated with obesity is the major allele.

The 'C' allele in the **rs6548238** SNP near the *TMEM18* gene was first linked to BMI and obesity in 2009, in a meta-analysis of 15 genome-wide association studies with over 91k people [R].

Since then, the link has been confirmed in many different studies, large and small. These studies involved children, adolescents, and/or adults from all over the world -- from Japan, China and New Zealand, over Europe and Africa, to North and South America [R, R, R, R, R, R, R, R, R, R, R, R, R, R].

In a German study with over 12k people, each copy of the 'T' allele was linked to a 14% lower chance of being obese (BMI ≥ 30 kg/m^2) [R].

In a study with over 700 brazilian children, those with 'CC' genotypes had a higher BMI already at 3.5 years old [R].

It's important to stress here, however, that this SNP seems to have different impacts in different populations. For example, the 'C' allele of rs6548238 seems to have a smaller impact on obesity in Africans compared to Europeans [R].

The 'C' allele of **rs2867125** has been linked to higher BMI in Europe, Korea, Japan, Singapore (including Chinese, Malay, and Indian ethnicities) and US (including Whites, African-Americans, and Pima Indians) [R, R, R, R, R, R, R, R, R, R, R].

Interestingly, a study with over 5.4k Pima Indians found that the rs2867125 'C' allele corresponded to around a 3.0% increase in BMI per copy, which was a 2-fold larger effect compared to Europeans [R].

The 'A' allele of **rs7561317** has been associated with lower and the 'G' allele with higher body weight. The link to BMI

BETTER GENETICS

Likely better TMEM18 genetics based on the genetic variants we looked at

31%

OF USERS SHARE THE SAME SCORE

You have the same genetic predisposition as 31% of our users.

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SH3YL1	rs6548238	TC
SH3YL1	rs2867125	TC
SH3YL1	rs7561317	AG
SH3YL1	rs4854344	GT

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

and obesity was found in Europe, Emirates, Japan, Mexico, Pakistan, and US [R, R, R, R, R, R, R, R, R, R].

In a study with over 18k middle-aged Danes, each copy of the 'G' allele was associated with a 1.2 times higher risk of obesity and 1.5 times higher risk of morbid obesity [R].

Interestingly, in a study with over 1.4k Czech adolescents, the 'A' allele increased the risk of being underweight [R].

Finally, the 'T' allele of **rs4854344** has been associated with higher body weight, BMI, greater waist circumference and an increased risk of obesity in Greek, Japanese, Spanish, and US studies [R, R, R, R, R].