

## MTHFR Test Report

This report provides results for two SNPs within the methylenetetrahydrofolate reductase (MTHFR) gene. The C677T (rs1801133) and the A1298C (rs1801131) are SNPs that are involved in the metabolism of Folic Acid to Folate in the blood.

***The report only specifies the geneotypes and phenotypes for the MTHFR gene. To derive clinical insights from the results, it is imperative that a specially trained physician or pharmacist interprets them. The patient's genotype is provided for informational purposes only.***

### MTHFR Profile

Single Nucleotide Polymorphism (SNPs)	Genotype	Level of Evidence
C677T (rs1801133)	AA	Moderate (PharmGKB)
A1298C (rs1801131)	GG	

### Interpretation

You are a poor converter of folic acid to methylfolate. Failure to convert folic acid may result in high levels of homocysteine in the blood, which may result in adverse health conditions. Other genetic and clinical factors may also affect folic acid conversion in patients. This annotation only covers the conversion relationship between MTHFR and folic acid and does not include evidence about clinical outcomes.

### Reported By:

Personalized Prescribing Inc.  
[info@personalizedprescribing.com](mailto:info@personalizedprescribing.com)  
Toll Free +1844-943-0210  
Fax: +1 647 576 2402  
[www.personalizedprescribing.com](http://www.personalizedprescribing.com)

### Tested & Verified By:

Signature of lab director

Dr. Amin Kerachian, M.D., Ph.D.  
Laboratory Director  
PGx Lab Solutions Inc.

## MTHFR Test Report

### Analytic Report

This report is not designed for diagnostic purposes. We are only reporting the analytic interpretation which aims to provide genetic insights to individuals and their healthcare providers. For clinical decision-making, it is imperative that the report is interpreted by a qualified physician or healthcare professional.

### Disclaimer

The responsibility for interpretation and utilization of this report rests solely with the individual's treating physician or healthcare professional, who should also consider the patient's complete medical history and any other pertinent data available in clinical literature.

### Test Methodology

The test was developed and validated in PGx Lab Solutions' (PGxL) laboratory. Genomic DNA was extracted based on the instructions of MagMax Saliva gDNA Isolation Kit (Applied Biosystems, USA) with an automatable magnetic bead-based sample preparation technology. PGxL uses in-house designed primers and assay reagents from Agena Bioscience, USA to perform the test. Genotyping was conducted by MassARRAY System (96-well with CPM) from Agena Biosciences, USA. The **MTHFR Folate test** is a laboratory-developed test (LDT) by PGx Lab Solutions, which has not been approved by Health Canada or the U.S. Food and Drug Administration (FDA). PGx Lab solutions is a Canadian genetic laboratory and a division of Personalized Prescribing Inc.

### Variants Tested

**MTHFR (rs1801131, rs1801133)**

### Limitation of Test Process

The test methodology has limitations. The quality and quantity of DNA extracted from patients are depended on saliva sample collection process, for example dietary or microbial influence which can impact the test process. PCR process can be influenced by exogenous enzymes or PCR inhibitors that may affect the assay result.

As the test does not include sequencing of whole genome, there could be undetected genetic variants that may influence the phenotype. **MTHFR Genotype / Phenotype test** is based on available resources in scientific platforms like PharmGKB, FDA, DPWG, CPIC and published literature.

### References

Reference for genes and SNPs tested in this assay are listed at:

[www.personalizedprescribing.com/references](http://www.personalizedprescribing.com/references)