sample type: BUCCAL



NeuroGenomic[™] Profile

NeuroGenomic[™] **Profile** evaluates single nucleotide polymorphisms (SNPs) in genes that modulate methylation, glutathione conjugation, oxidative protection (and the potential to evaluate vascular oxidation).

The test uncovers potential genetic susceptibility to:

- Neurodegenerative Disorders
- Developmental Issues
- Mood Disorders
- Oxidative Stress
- Detoxification Capacity

Methylation

- MTHFR (methylenetetrahydrofolate reductase)
- COMT (catechol-O-methyltransferase)

These genes affect how homocysteine and methionine are metabolized to support formation of S-adenosylmethionine (SAMe). The ability to donate methyl groups affects neurologic function and is modifiable by proper B-vitamin intake.

Detoxification

- · GSTM (glutathione-s-transferase, M, isoforum)
- GSTP (glutathione-s-transferase, P, isoforum)

These genes are responsible for detoxifying products of oxidative stress and carcinogens. Variants decrease detoxification capacity.

Oxidative Protection

• SOD-2 (Superoxide dismutase -2)

These genetic variants alter anti-oxidant enzyme activity and modify requirements for anti-oxidants.

- Specimen Requirements:
- Buccal Swab
- · Before Patient Takes this Test:
- See instructions inside test kit for more details



NeuroGenomic[™] Profile



63 Zillicoa Street Asheville, NC 28801 © Genova Diagnostics

Patient: SAMPLE

PATIENT

Age: 10 Sex: M MRN:

Order Number:

Completed: February 11, 2008 Received: January 31, 2008 Collected: January 28, 2008

MTHFR	5,10-methyltetrahydrofolate reductase : METHYLATION
Location: Chromosome 1 C677T Your Genotype:	5,10-methylenetetrahydrofolate reductase (MTHFR) is a key enzyme in folate metabolism, facilitating the formation of methyltetrahydrofolate, a required cofactor in the remethylation of homocysteine (Hcy) to methionine
	Health Implications Heterozygosity for both 677 (-/+) and 1298 (-/+) results in 50-60% reduction in MTHFR enzyme activity, low folate status, and increased risk of elevated homocysteine (and S-adenosylhomocysteine, or SAH) MTHFR polymorphism-induced SAH elevations may disrupt neurotransmitter metabolism as well as
A1298C Your Genotype:	synthesis of DNA, carnitine, and coenzyme Q10 Increased risk of autism, depression, neural tube defects, cardiovascular disease, diabetic retinopathy, osteoporosis, and some cancers Low folate status significantly increases risk of associated disorders
++ -	Treatment Options · Ensure adequate intake of folate-rich green vegetables
	Consider supplementation with folic acid (or folinic acid or 5-methyltetrahydrofolate), vitamins B2, B3, B6 (pyridoxal 5-phosphate), B12 (or methylcobalamin), and betaine (trimethylglycine)

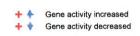
Key

Neither chromosome carries the genetic variation.

One chromosome (of two) carries the genetic variation.

+ + Both chromosomes carry the genetic variation.

(You inherit one chromosome from each parent)





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GALA RMS 3079

For test kits, clinical support, or more information contact:
SUNNYSIDE HEALTH CENTER
17396 S. Rory Ct.
Oregon City, OR 97045
(503) 631-4184

Related Phenotype Assessments

Follow-up:

To regularly monitor therapeutic interventions that modify genetic expression

- Optimal Nutritional Evaluation (ONE)
- Oxidative Stress
 Profile (blood or urine)
- Detoxification Profile (urine)
- Metabolic Analysis Profile (urine)
- Amino Acids Analysis (blood or urine)