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4 TULIP STREET  
MIAMI QLD 4220

**TARA POWELL**  
**29-Dec-1985**

**Female**

10 CHAINEY AVENUE  
MIAMI QLD 4220

LAB ID : 3833526  
UR NO. : 6610380  
Collection Date : 09-Aug-2022  
Received Date:11-Aug-2022



3833526

## GENOMIC\_ASSESSMENTS

SWAB, Buccal Result Range Units

### MTHFR Gene Mutation

MethyleneTetraHydroFolate Reductase (MTHFR) Gene Mutation.

MTHFR Gene Mutation (A1298C): **HOMOZYGOUS** for the mutation.

MTHFR Gene Mutation (C677T): **Negative** - Mutation not found.

Method: Quantitative Real-time Polymerase Chain Reaction (qRT-PCR)

#### Comment:

The patient has two copies of the MTHFR A1298C mutation.

This is associated with decreased enzyme activity (minimal up to 40% loss of function), but no increase in plasma homocysteine levels nor increased risk for venous thrombosis.

MethyleneTetraHydroFolate Reductase (MTHFR) is a regulatory enzyme in folate-dependent homocysteine remethylation.

A common polymorphism in the MTHFR gene at position 677 is associated with a thermolabile enzyme with decreased activity. The prevalence of the homozygous mutation ranges from 8- 18% in various populations.

Clinically, homozygotes for the mutation have an increased risk of thromboembolism as well as premature vascular disease.

A second mutation (A1298C) has also been described. This mutation is associated with an increased risk of thromboembolism, when only found together with the C677T mutation.

**Assessment of other biochemical markers involved in the methylation cycles will give a more in-depth assessment of the patient's methylation status/function.**

**Assessments include Methylation Profile, Methionine Metabolism Profile, Folate Metabolism Profile, SAME/SAH ratio, Homocysteine.**

Test performed by accredited laboratory NATA: 20082

Tests ordered: MTHFR,IMPEI