

461



MR PETER DONALD
TOTAL HEALTH CENTRAL COAST
37 TREELANDS DR
JILLIBY 2259

MOLECULAR BIOLOGY

SPECIMEN: BUCCAL SWAB

Methylenetetrahydrofolate (MTHFR)

MTHFR Gene Mutation (C677T) : Mutation not found

MTHFR Gene Mutation (A1298C): Heterozygous for the mutation

Comment: The patient has one copy of the MTHFR A1298C mutation and is negative for the C677T mutation. This is not associated with increased plasma homocysteine nor venous thrombosis.

Method: Polymerase chain reaction (PCR) and sequence specific hybridisation.

Clinical notes: 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 been described. This mutation is associated with an increased risk of thromboembolism, only when found together with the C677T mutation.

Reference: Frosst P et al Nature Genetics 1995;10:111-13.
Weisberg IS et al Atherosclerosis 2001;2:409-15.

MFR-R