#ret #incomplete

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1 | SNP. Project. Write-up.

Resources: [[KBxSNPPCR]] Instructions

1.0.1 | Part One

Outline

- basics
- function and regulation
- SNP effect

Writing!

The *COMT* gene, or catechol-O-methyltransferase, encodes the *COMT* enzyme which is responsible for breaking down neurotransmitters the brain's prefrontal cortex. More specifically, it acts as a catalyst for the transfer of a methyl group from S-adenosylmethionine to dopamine, epinephrine, and norepinephrine. This process, called O-methylation, leads to the degradation of the aforementioned neurotransmitters. The *COMT* enzyme also effects the metabolism of exogenous substances, but that is irrelevant for the mutation at hand citation. The *COMT* gene itself is 27.22kb long and located on chromosome 22q11.2 citation. It has ubiquitous expression in 27 tissues, including the placenta, the adrenal, and the lung citation. Val158Met, also known as rs4680, is a common missense mutation swapping a guanine for an adenine. It has the frequency G=0.510915, and thus, A=0.489085. Val158Met causes