

MRM1 methylates guanosine-1145 of 16S rRNA yielding 2'-O-methylguanosine-1145

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Literature references

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Reactome database release: 88

This document contains 1 reaction ([see Table of Contents](#))

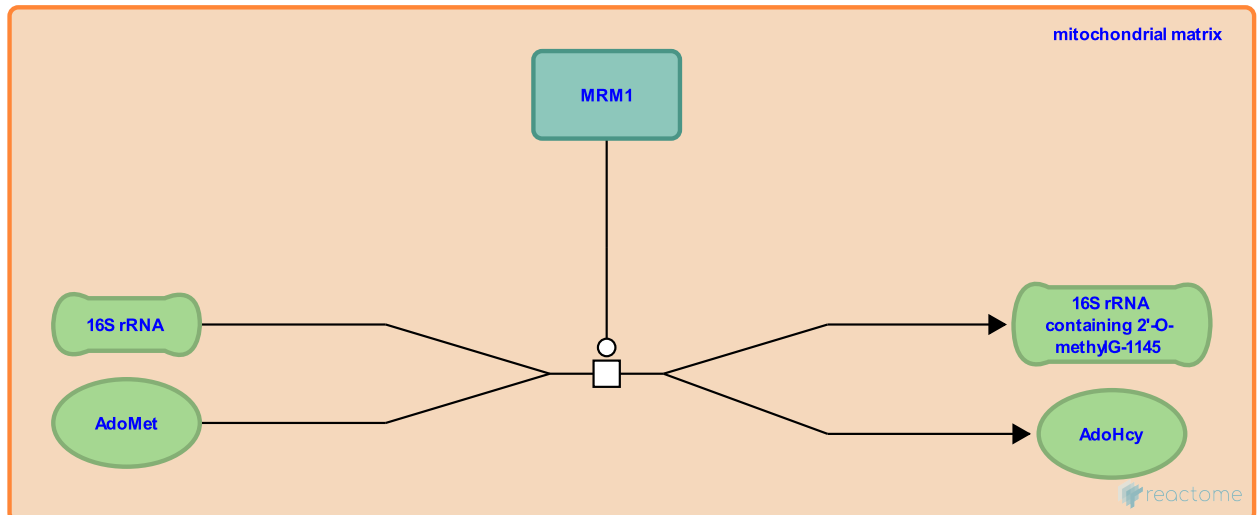
MRM1 methylates guanosine-1145 of 16S rRNA yielding 2'-O-methylguanosine-1145



Stable identifier: R-HSA-6793122

Type: transition

Compartments: mitochondrial matrix



MRM1 located in foci near mitochondrial nucleoids (Lee et al. 2013) transfers a methyl group from S-adenosylmethionine to the 2' hydroxyl of guanosine-1145 in 16S rRNA (Lee and Bogenhagen 2014).

Literature references

Bogenhagen, DF., Lee, KW. (2014). Assignment of 2'-O-methyltransferases to modification sites on the mammalian mitochondrial large subunit 16 S ribosomal RNA (rRNA). *J. Biol. Chem.*, 289, 24936-42. [↗](#)

Okot-Kotber, C., Bogenhagen, DF., LaComb, JF., Lee, KW. (2013). Mitochondrial ribosomal RNA (rRNA) methyltransferase family members are positioned to modify nascent rRNA in foci near the mitochondrial DNA nucleoid. *J. Biol. Chem.*, 288, 31386-99. [↗](#)

Editions

2015-08-30	Authored, Edited	May, B.
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