ETFBKMT transfers 3xCH3 from 3xAdoMet to ETFB

Falnes, PØ., Jupe, S.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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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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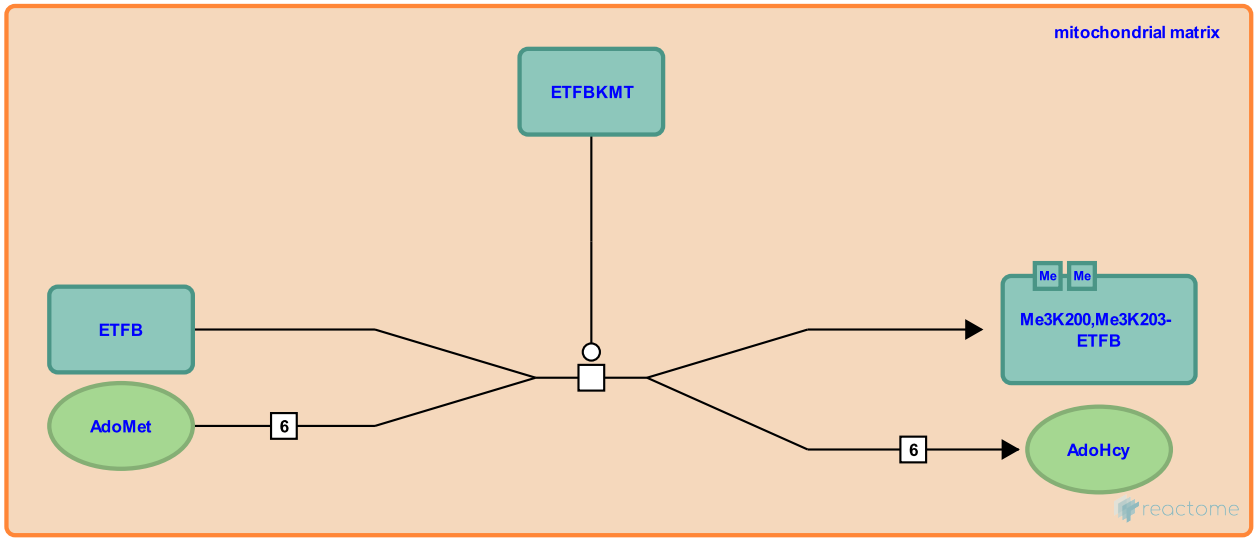
Stable identifier: R-HSA-8931858

Type: transition

Compartments: mitochondrial matrix



Electron transfer flavoprotein beta subunit lysine methyltransferase (ETFBKMT, METTL20) specifically methylates Lys-200 and Lys-203 of Electron transfer flavoprotein beta (ETFB)) (Rhein et al 2014, Malecki et al. 2015). ETF shuttles electrons between several FAD-containing dehydrogenases present in the mitochondrial matrix and the membrane-bound ETF:quinone oxidoreductase (Ramsay et al. 1987). ETFB is proposed to contain 'recognition loop' at residues 191–200, responsible for interaction with the dehydrogenases (Toogood et al. 2004). Methylation of ETF impairs its ability to extract electrons from two acyl-CoA dehydrogenases, MCAD and GCDH, suggesting a functional role for ETFBKMT-mediated methylation of ETFB (Malecki et al. 2015).

Literature references

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Editions

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