

Dnmt3b:Dnmt3l methylates cytosine in DNA

Beekman, R., Martín-Subero, JI., May, B.

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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Reactome database release: 88

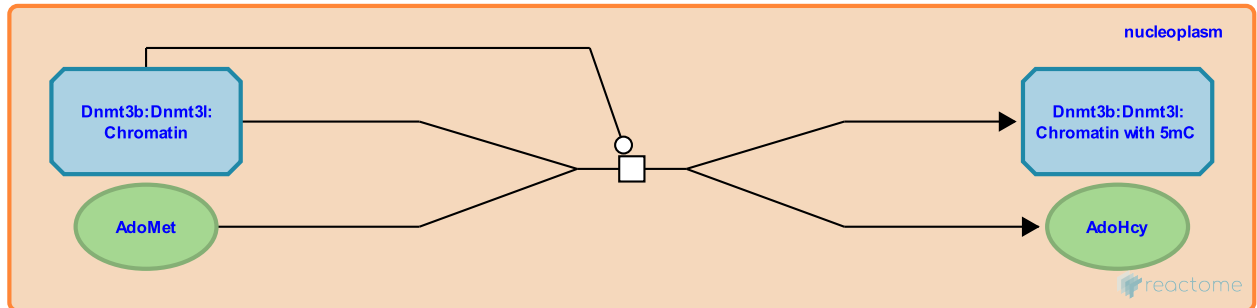
This document contains 1 reaction ([see Table of Contents](#))

Dnmt3b:Dnmt3l methylates cytosine in DNA [↗](#)

Stable identifier: R-MMU-5336380

Type: transition

Compartments: nucleoplasm



Dnmt3b methylates the 5 position of cytosine in DNA. Dnmt3b catalyzes de novo methylation of cytosine residues (Okano et al. 1998, Hsieh 1999) in CG sequences (Hsieh 1999) and in non-CG sequences (Arand et al. 2012). Methylation of C residues in non-CG contexts is observed only in embryonic stem cells and appears to be catalyzed by Dnmt3b and Dnmt3a acting with Dnmt3l (Arand et al. 2012).

Literature references

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Editions

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