

Mouse Dnmt3l Blocking Peptide (C-term)

Synthetic peptide

Catalog # BP21520b

Specification

Mouse Dnmt3l Blocking Peptide (C-term) - Product Information

Primary Accession

[Q9CWR8](#)**Mouse Dnmt3l Blocking Peptide (C-term) - Additional Information**

Gene ID 54427

Other Names

DNA (cytosine-5)-methyltransferase 3-like, Dnmt3l

Target/Specificity

The synthetic peptide sequence is selected from aa 383-397 of HUMAN Dnmt3l

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Dnmt3l Blocking Peptide (C-term) - Protein Information

Name Dnmt3l

Function

Catalytically inactive regulatory factor of DNA methyltransferases that can either promote or inhibit DNA methylation depending on the context (PubMed:11719692, PubMed:15318244, PubMed:15671018, PubMed:24074865). Essential for the function of DNMT3A and DNMT3B: activates DNMT3A and DNMT3B by binding to their catalytic domain (PubMed:15671018). Acts by accelerating the binding of DNA and S-adenosyl-L-methionine (AdoMet) to the methyltransferases and dissociates from the complex after DNA binding to the methyltransferases (PubMed:15671018). Recognizes unmethylated histone H3 lysine 4 (H3K4me0) and induces de novo DNA methylation by recruitment or activation of DNMT3 (By similarity). Plays a key role in embryonic stem cells and germ cells (PubMed:11719692).

target="_blank">11719692, PubMed:15318244, PubMed:24074865). In germ cells, required for the methylation of imprinted loci together with DNMT3A (PubMed:11719692). In male germ cells, specifically required to methylate retrotransposons, preventing their mobilization (PubMed:15318244). Plays a key role in embryonic stem cells (ESCs) by acting both as an positive and negative regulator of DNA methylation (PubMed:24074865). While it promotes DNA methylation of housekeeping genes together with DNMT3A and DNMT3B, it also acts as an inhibitor of DNA methylation at the promoter of bivalent genes (PubMed:24074865). Interacts with the EZH2 component of the PRC2/EED- EZH2 complex, preventing interaction of DNMT3A and DNMT3B with the PRC2/EED-EZH2 complex, leading to maintain low methylation levels at the promoters of bivalent genes (PubMed:24074865). Promotes differentiation of ESCs into primordial germ cells by inhibiting DNA methylation at the promoter of RHOX5, thereby activating its expression (PubMed:24074865).

Cellular Location

Nucleus.

Tissue Location

Expressed in testis, thymus, ovary, and heart (PubMed:11306809).

Mouse Dnmt3l Blocking Peptide (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

Mouse Dnmt3l Blocking Peptide (C-term) - Images

Mouse Dnmt3l Blocking Peptide (C-term) - Background

Catalytically inactive regulatory factor of DNA methyltransferases. It is essential for the function of DNMT3A and DNMT3B. Activates DNMT3A and DNMT3B by binding to their catalytic domain. Accelerates the binding of DNA and AdoMet to the methyltransferases and dissociates from the complex after DNA binding to the methyltransferases.

Mouse Dnmt3l Blocking Peptide (C-term) - References

Aapola U.,et al.Cytogenet. Cell Genet. 92:122-126(2001).
Shaoping X.,et al.Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
Carninci P.,et al.Science 309:1559-1563(2005).
Bourc'his D.,et al.Science 294:2536-2539(2001).
Gowher H.,et al.J. Biol. Chem. 280:13341-13348(2005).