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(Mouse) Ezh2 Blocking Peptide (Center)

Synthetic peptide
Catalog # BP21367c

Specification

(Mouse) Ezh2 Blocking Peptide (Center) - Product Information

Primary Accession O61188

(Mouse) Ezh2 Blocking Peptide (Center) - Additional Information

Gene ID 14056

Other Names
Histone-lysine N-methyltransferase EZH2, ENX-1, Enhancer of zeste homolog 2, Ezh2, Enx1h

Target/Specificity
The synthetic peptide sequence is selected from aa 260-275 of HUMAN Ezh2

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) Ezh2 Blocking Peptide (Center) - Protein Information

Name Ezh2 {ECO:0000312|MGI:MGI:107940}

Synonyms Enx1h

Function
Polycomb group (PcG) protein. Catalytic subunit of the PRC2/EED-EZH2 complex,

(Mouse) Ezh2 Blocking Peptide (Center) - Background

Polycomb group (PcG) protein. Catalytic subunit of the PRC2/EED-EZH2 complex, which methylates (H3K9me) and 'Lys-27' (H3K27me) of histone H3, leading to transcriptional repression of the affected target gene. Able to mono-, di- and trimethylate 'Lys-27' of histone H3 to form H3K27me1, H3K27me2 and H3K27me3, respectively. Compared to EZH2-containing complexes, it is more abundant in embryonic stem cells and plays a major role in forming H3K27me3, which is required for embryonic stem cell identity and proper differentiation. The PRC2/EED-EZH2 complex may also serve as a recruiting platform for DNA methyltransferases, thereby linking two epigenetic repression systems. Genes repressed by the PRC2/EED-EZH2 complex include HOXA7, HOXB6 and HOXC8. EZH2 can also methylate non-histone proteins such as the transcription factor GATA4 and the nuclear receptor RORA. Regulates the circadian clock via histone methylation at the promoter of the circadian genes. Essential for the CRY1/2-mediated repression of the transcriptional activation of PER1/2 by the CLOCK-ARNTL/BMAL1 heterodimer; involved in the di and trimethylation of 'Lys-27' of histone H3 on PER1/2 promoters which is necessary for the CRY1/2 proteins to inhibit transcription.

(Mouse) Ezh2 Blocking Peptide (Center) - References

Hobert O.,et al.Mech. Dev. 55:171-184(1996).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Laible G.,et al.Mamm. Genome 10:311-314(1999).
Denisenko O.N.,et al.Mol. Cell. Biol. 18:5634-5642(1998).
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which methylates (H3K9me) and 'Lys-27' (H3K27me) of histone H3, leading to transcriptional repression of the affected target gene. Able to mono-, di- and trimethylate 'Lys-27' of histone H3 to form H3K27me1, H3K27me2 and H3K27me3, respectively. Displays a preference for substrates with less methylation, loses activity when progressively more methyl groups are incorporated into H3K27, H3K27me0 > H3K27me1 > H3K27me2. Compared to EZH1-containing complexes, it is more abundant in embryonic stem cells and plays a major role in forming H3K27me3, which is required for embryonic stem cell identity and proper differentiation. The PRC2/EED-EZH2 complex may also serve as a recruiting platform for DNA methyltransferases, thereby linking two epigenetic repression systems. Genes repressed by the PRC2/EED-EZH2 complex include HOXA7, HOXB6 and HOXC8. EZH2 can also methylate non- histone proteins such as the transcription factor GATA4 and the nuclear receptor RORA. Regulates the circadian clock via histone methylation at the promoter of the circadian genes. Essential for the CRY1/2-mediated repression of the transcriptional activation of PER1/2 by the CLOCK- ARNTL/BMAL1 heterodimer; involved in the di and trimethylation of 'Lys- 27' of histone H3 on PER1/2 promoters which is necessary for the CRY1/2 proteins to inhibit transcription.

Cellular Location
Nucleus. Chromosome. Note=Localizes to the inactive X chromosome in trophoblast stem cells.

Tissue Location
Present in actively dividing cells (PubMed:19026781). Widely expressed in early embryos (PubMed:19026781) In later embryogenesis, expression restricted to central and peripheral nervous system, liver and thymus (PubMed:19026781). In adult, highest expression in spleen, testis and placenta (PubMed:19026781, PubMed:31451685). Lower levels in intestine, muscle and ovary and very low levels in brain and liver (PubMed:19026781, PubMed:31451685). No expression in heart, thyroid gland, lung and kidney (PubMed:19026781)

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(Mouse) Ezh2 Blocking Peptide (Center) - Protocols

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

- Blocking Peptides