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(Mouse) Ezh2 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21367c

Product Information

Application	WB, E
Primary Accession	Q61188
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB51326
Calculated MW	85292

Additional Information

Gene ID	14056
Other Names	Histone-lysine N-methyltransferase EZH2, ENX-1, Enhancer of zeste homolog 2, Ezh2, Enx1h
Target/Specificity	This Mouse Ezh2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 260-295 amino acids from the Central region of Mouse Ezh2.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	(Mouse) Ezh2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Ezh2 {ECO:0000312|MGI:MGI:107940}
Synonyms	Enx1h
Function	Catalytic subunit of the PRC2/EED-EZH2 complex, a Polycomb group (PcG) complex that methylates 'Lys-9' (H3K9me) and 'Lys-27' (H3K27me) of histone

	H3, leading to transcriptional repression of the affected target gene (PubMed:12689588, PubMed:15516932, PubMed:15520282, PubMed:16717091, PubMed:19026780, PubMed:31914400). Able to mono-, di- and trimethylate 'Lys-27' of histone H3 to form H3K27me1, H3K27me2 and H3K27me3, respectively (PubMed:16717091, PubMed:18086877). Displays a preference for substrates with less methylation, loses activity when progressively more methyl groups are incorporated into H3K27, H3K27me0 > H3K27me1 > H3K27me2 (By similarity). 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 (By similarity). The PRC2/EED-EZH2 complex may also serve as a recruiting platform for DNA methyltransferases, thereby linking two epigenetic repression systems (By similarity). Genes repressed by the PRC2/EED-EZH2 complex include HOXC8, HOXA9, MYT1, CDKN2A and retinoic acid target genes (PubMed:18086877). EZH2 can also methylate non-histone proteins such as the transcription factor GATA4 and the nuclear receptor RORA (By similarity). Regulates the circadian clock via histone methylation at the promoter of the circadian genes (PubMed:16717091). Essential for the CRY1/2-mediated repression of the transcriptional activation of PER1/2 by the CLOCK-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 (PubMed:16717091).
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)

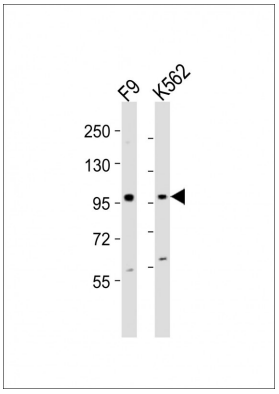
Background

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.

References

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O'Carroll D.,et al.Mol. Cell. Biol. 21:4330-4336(2001).

Images



All lanes : Anti-Ezh2 Antibody (Center) at 1:2000 dilution Lane 1: F9 whole cell lysates Lane 2: K562 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 85 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.