

Recombinant Human EZH2 Protein

Cat. No. EZH2-2908H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human EZH2 protein without tag was expressed in E. coli.
Species	Human
Source	E.coli
Description	Polycomb group (PcG) protein. Catalytic subunit of the PRC2/EED-EZH2 complex, which methylates' Lys-9' (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 HOXC8, HOXA9, MYT1, CDKN2A and retinoic acid target genes. 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

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	inhibit transcription.
Purity	>90 % as determined by SDS-PAGE.
Notes	For research use only.
Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.
Storage Buffer	Supplied as solution form in PBS pH 7.5 or lyophilized from PBS pH 7.5.
Reconstitution	Reconstitute in sterile water for a stock solution.
Shipping	In general, proteins are provided as lyophilized powder/frozen liquid. They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	EZH2 enhancer of zeste homolog 2 (Drosophila) [Homo sapiens (human)]
Official Symbol	EZH2
Synonyms	EZH2; enhancer of zeste homolog 2 (Drosophila); enhancer of zeste (Drosophila) homolog 2; histone-lysine N-methyltransferase EZH2; ENX 1; EZH1; KMT6; KMT6A; lysine N-methyltransferase 6; ENX1; WVS2; ENX-1; MGC9169;
Gene ID	2146
mRNA Refseq	NM_001203247

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Protein Refseq	NP_001190176
MIM	601573
UniProt ID	Q15910

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