Anti-EZH2 antibody

Description	Unconjugated Rabbit polyclonal to EZH2

Model	STJ192305
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, WB
Gene ID	2146
Gene Symbol	EZH2
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	EZH2 Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Expressed in many tissues. Overexpressed in numerous tumor types including carcinomas of the breast, colon, larynx, lymphoma and testis.
Purification	EZH2 antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Histone-lysine N-methyltransferase EZH2 ENX-1 Enhancer of zeste homolog 2 Lysine N-methyltransferase 6
Molecular Weight	82 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG

Formulation	Liquid form in PBS containing 50% glycerol,and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:3527OMIM:277590
Alternative Names	Histone-lysine N-methyltransferase EZH2 ENX-1 Enhancer of zeste homolog 2 Lysine N-methyltransferase 6
Function	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 inhibit transcription.
Cellular Localization	Nucleus
Post-translational Modifications	Phosphorylated by AKT1. Phosphorylation by AKT1 reduces methyltransferase activity. Phosphorylation at Thr-345 by CDK1 and CDK2 promotes maintenance of H3K27me3 levels at EZH2-target loci, thus leading to epigenetic gene silencing. Sumoylated. Glycosylated: O-GlcNAcylation at Ser-75 by OGT increases stability of EZH2 and facilitates the formation of H3K27me3 by the PRC2/EED-EZH2 complex.