EZH2 (Phospho Thr311) Rabbit pAb

CatalogNo: YP1332

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB

MW
- 82kD (Observed)

Isotype
- IgG

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:1000-2000

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	Synthesized phosho peptide around human Ezh2 (Thr311)
Specificity	This antibody detects endogenous levels of Human Ezh2 (phospho-Thr311)

Target Information

Gene name	EZH2 KMT6

Protein Name EZH2 (Thr311)

Organism	Gene ID	UniProt ID
Human	2146;	Q15910;
Mouse	14056;	Q61188;

Cellular Localization Nucleus . Localizes to the inactive X chromosome in trophoblast stem cells. .

Tissue specificity In the ovary , expressed in primordial follicles and oocytes and also in external follicle cells (at protein level) (PubMed:31451685) . Expressed in many tissues (PubMed:14532106) . Overexpressed in numerous tumor types including carcinomas of the breast , colon , larynx , lymphoma and testis (PubMed:14532106) .

Function Catalytic activity:S-adenosyl-L-methionine + histone L-lysine = S-adenosyl-L-homocysteine + histone N (6) -methyl-L-lysine. ,Caution:Two variants of the PRC2 complex have been described , termed PRC3 and PRC4. Each of the three complexes may include a different complement of EED isoforms , although the precise sequences of the isoforms in each complex have not been determined. The PRC2 and PRC4 complexes may also methylate 'Lys-26' of histone H1 in addition to 'Lys-27' of histone H3 (PubMed:15099518 and PubMed:15684044) , although other studies have demonstrated no methylation of 'Lys-26' of histone H1 by PRC2 (PubMed:16431907) . ,developmental stage:Expression decreases during senescence of embryonic fibroblasts (HEFs) . Expression peaks at the G1/S phase boundary. ,Function:Polycomb group (PcG) protein. Catalytic subunit of the PRC2/EED-EZH2 complex , which methylates 'Lys-9' and 'Lys-27' 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 HOXC8 , HOXA9 , MYT1 and CDKN2A. ,induction:Expression is induced by E2F1 , E2F2 and E2F3. Expression is reduced in cells subject to numerous types of stress including UV- , IR- and bleomycin-induced DNA damage and by activation of TP53/p53. ,PTM:Phosphorylated by AKT1. Phosphorylation by AKT1 reduces methyltransferase activity. ,similarity:Belongs to the histone-lysine methyltransferase family. EZ subfamily. ,similarity:Contains 1 SET domain. ,subunit:Binds ATRX via the SET domain (Probable) . Component of the PRC2/EED-EZH2 complex , which includes EED , EZH2 , SUZ12 , RBBP4 and RBBP7 and possibly AEBP2. The minimum components required for methyltransferase activity of the PRC2/EED-EZH2 complex are EED , EZH2 and SUZ12. The PRC2 complex may also interact with DNMT1 , DNMT3A , DNMT3B and PHF1 via the EZH2 subunit and with SIRT1 via the SUZ12 subunit. Interacts with HDAC1 and HDAC2. ,tissue specificity:Expressed in many tissues. Overexpressed in numerous tumor types including carcinomas of the breast , colon , larynx , lymphoma and testis. ,

Validation Data

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