

Rabbit EZH2 Polyclonal Antibody | anti-EZH2 antibody

Phospho-EZH2 (Ser311) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329244	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence

PRODUCT SYNONYMS

EZH2; Polyclonal Antibody; Phospho-EZH2 (Ser311) Antibody; Enhancer of zeste 2; enhancer of zeste 2 polycomb repressive complex 2 subunit; Enhancer of zeste homolog 2 (Drosophila); Enhancer of zeste homolog 2; Enhancer of zeste; Drosophila; homolog 2; ENX 1; Enx 1h; ENX-1; ENX1; Enx1h; EZH 2; EZH1; EZH2_HUMAN; EZH2b; Histone-lysine N-methyltransferase EZH2; KMT 6; KMT6; KMT6A; Lysine N-methyltransferase 6; MGC9169; WVS; WVS2; anti-EZH2 antibody

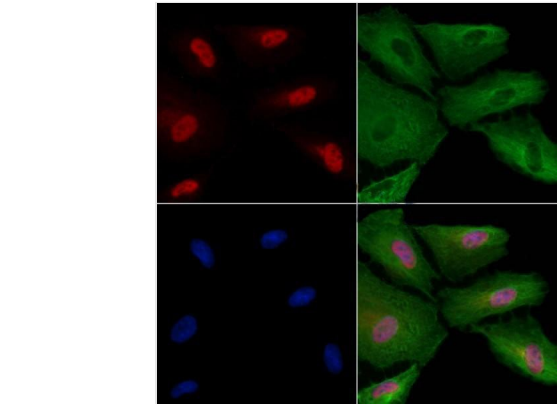
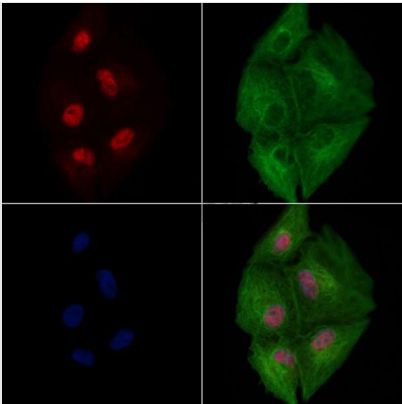
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-EZH2 (Ser311) Antibody detects endogenous levels of EZH2 only when phosphorylated at Ser311. Tissue Specificity: Expressed in many tissues. Overexpressed in numerous tumor types including carcinomas of the breast, colon, larynx, lymphoma and testis.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-EZH2 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence)
Immunogen	A synthesized peptide derived from human EZH2 around the phosphorylation site of Ser311.
Conjugation	Unconjugated
Fragment	Fab fragment
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.
Subunit Structure	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. Interacts with PRAME. Interacts with CDYL. Interacts with CLOCK, ARNTL/BMAL1 and CRY1 (By similarity). Interacts with DNMT3L; the interaction is direct (By similarity). Interacts with EZHIP; the interaction blocks EZH2 methyltransferase activity.
Similarity	Belongs to the class V-like SAM-binding methyltransferase superfamily. Histone-lysine methyltransferase family. EZ subfamily.
Subcellular Location	Nucleus.

Preparation and Storage

Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)
Staining A549 cells(heat shock treatment) by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. Samples were then incubated with primary Ab(AF3583) and mouse anti-beta tubulin Ab(T0023) for 1 hour at 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI (blue).

IF (Immunofluorescence)
Staining A549 cells(4h of LPS treatment) by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. Samples were then incubated with primary Ab(AF3583) and mouse anti-beta tubulin Ab(T0023) for 1 hour at 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI (blue).

ADDITIONAL INFORMATION

Related Product Information for anti-EZH2 antibody	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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	322506097
NCBI GeneID	2146
NCBI Accession #	NP_001190176.1
NCBI GenBank Nucleotide #	NM_001203247.1
UniProt Accession #	Q15910; Q15755; Q75MG3; Q92857; Q96FI6; B2RAQ1; B3KS30; B7Z1D6; B7Z7L6
Molecular Weight	746
NCBI Official Full Name	histone-lysine N-methyltransferase EZH2 isoform c
NCBI Official Synonym Full Names	enhancer of zeste homolog 2 (Drosophila)
NCBI Official Symbol	EZH2
NCBI Official Synonym Symbols	WVS; ENX1; EZH1; KMT6; WVS2; ENX-1; EZH2b; KMT6A

NCBI Protein Information	histone-lysine N-methyltransferase EZH2; lysine N-methyltransferase 6
UniProt Protein Name	Histone-lysine N-methyltransferase EZH2
UniProt Gene Name	EZH2
UniProt Synonym Gene Names	KMT6
UniProt Entry Name	EZH2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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