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KD-Validated Anti-EZH2 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1998

Specification

KD-Validated Anti-EZH2 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q15910
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1 kappa**
Calculated MW	**Predicted, 85 kDa, observed, 98 kDa KDa**
Gene Name	**EZH2**
Aliases	**EZH2; Enhancer Of Zeste 2 Polycomb Repressive Complex 2 Subunit 2; ENX-1; KMT6; KMT6A; Histone-Lysine N-Methyltransferase EZH2; Lysine N-Methyltransferase 6; Enhancer Of Zeste Homolog 2; EZH1; Enhancer Of Zeste (Drosophila) Homolog 2; Enhancer Of Zeste Homolog 2 (Drosophila); EC 2.1.1.356; EC 2.1.1.43; EC 2.1.1; EZH2b; ENX1; WVS2; WVS**
Immunogen	**Recombinant protein of human EZH2**

KD-Validated Anti-EZH2 Mouse Monoclonal Antibody - Additional Information

Gene ID **2146**

Other Names
Histone-lysine N-methyltransferase EZH2, 2.1.1.356, ENX-1, Enhancer of zeste homolog 2, Lysine N-methyltransferase 6, EZH2 (HGNC:3527), KMT6

KD-Validated Anti-EZH2 Mouse Monoclonal Antibody - Protein Information

Name EZH2 (HGNC:3527)

Synonyms KMT6

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 (PubMed:22323599, PubMed:<a

href="http://www.uniprot.org/citations/30923826" target="_blank">30923826). 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-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 Location
Nucleus. Note=Localizes to the inactive X chromosome in trophoblast stem cells. {ECO:0000250|UniProtKB:Q61188}

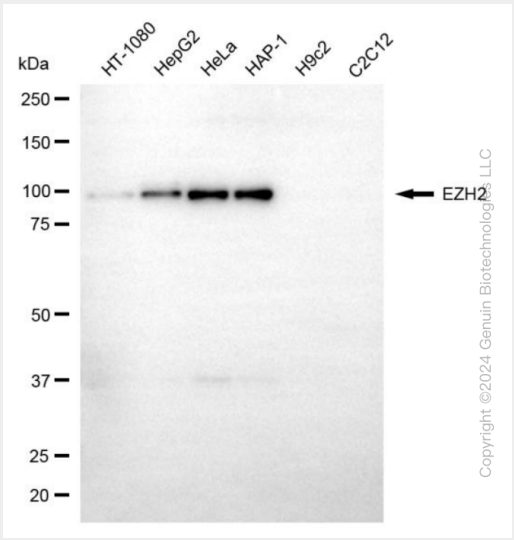
Tissue Location
In the ovary, expressed in primordial follicles and oocytes and also in external follicle cells (at protein level) (PubMed:31451685). Expressed in many tissues (PubMed:14532106) Overexpressed in numerous tumor types including carcinomas of the breast, colon, larynx, lymphoma and testis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

KD-Validated Anti-EZH2 Mouse Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-EZH2 Mouse Monoclonal Antibody - Images



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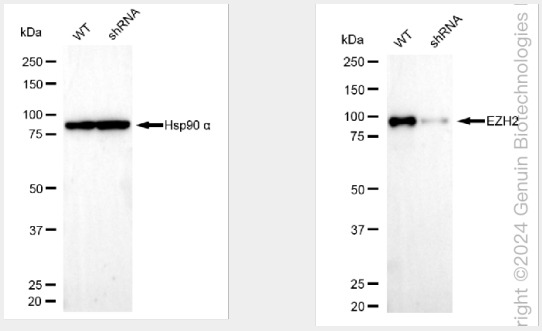
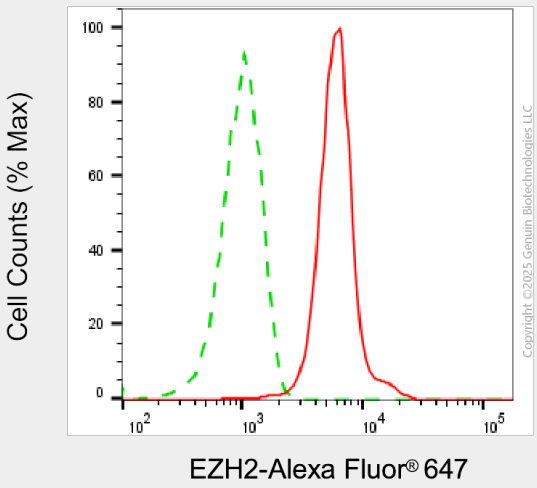
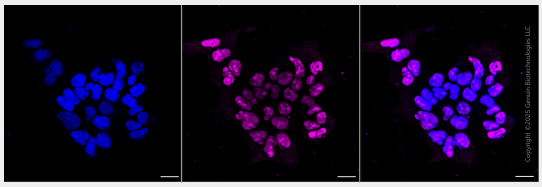
Western blotting analysis using anti-EZH2 antibody (Cat#AGI1998). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-EZH2 antibody (Cat#AGI1998, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-EZH2 antibody (Cat#AGI1998). EZH2 expression in wild-type (WT) and EZH2 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-EZH2 antibody (Cat#AGI1998, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Flow cytometric analysis of EZH2 expression in HAP-1 cells using anti-EZH2 antibody (Cat#AGI1998, 1:2,000). Green, isotype control; red, EZH2.



Immunocytochemical staining of HAP-1 cells with anti-EZH2 antibody (Cat#AGI1998, 1:1,000). Nuclei were stained blue with DAPI; EZH2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and Smart Gain□High. Scale bar, 20 µm.