

KD-Validated Anti-KMT6/EZH2 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI2399**Specification****KD-Validated Anti-KMT6/EZH2 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	Q15910
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 85 kDa; Observed, 98 kDa
Gene Name	KDa EZH2
Aliases	Enhancer Of Zeste 2 Polycomb Repressive Complex 2 Subunit; 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	A synthesized peptide derived from human KMT6 / EZH2

KD-Validated Anti-KMT6/EZH2 Rabbit 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 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=3527), KMT6	

KD-Validated Anti-KMT6/EZH2 Rabbit Monoclonal Antibody - Protein Information**Name** EZH2 ([HGNC:3527](#))**Synonyms** KMT6**Function**

Catalytic subunit of the PRC2/EED-EZH2 complex, a Polycomb group (PcG) complex that methylates 'Lys-9' (H3K9me) and 'Lys-27' (H3K27me) of histone H3, leading to transcriptional repression of the affected target gene (PubMed:[14532106](http://www.uniprot.org/citations/14532106), PubMed:[15225548](http://www.uniprot.org/citations/15225548), PubMed:[15385962](http://www.uniprot.org/citations/15385962), PubMed:[16618801](http://www.uniprot.org/citations/16618801)),

[16936726](http://www.uniprot.org/citations/16936726), PubMed: [17344414](http://www.uniprot.org/citations/17344414), PubMed: [22323599](http://www.uniprot.org/citations/22323599), PubMed: [24474760](http://www.uniprot.org/citations/24474760), PubMed: [26581166](http://www.uniprot.org/citations/26581166), PubMed: [30026490](http://www.uniprot.org/citations/30026490), PubMed: [30923826](http://www.uniprot.org/citations/30923826)). Able to mono-, di- and trimethylate 'Lys-27' of histone H3 to form H3K27me1, H3K27me2 and H3K27me3, respectively (PubMed: [15231737](http://www.uniprot.org/citations/15231737) target="_blank">15231737, PubMed: [17210787](http://www.uniprot.org/citations/17210787) target="_blank">17210787, PubMed: [18285464](http://www.uniprot.org/citations/18285464) target="_blank">18285464, PubMed: [22323599](http://www.uniprot.org/citations/22323599) target="_blank">22323599, PubMed: [30923826](http://www.uniprot.org/citations/30923826) target="_blank">30923826). Displays a preference for substrates with less methylation, loses activity when progressively more methyl groups are incorporated into H3K27, H3K27me0 > H3K27me1 > H3K27me2 (PubMed: [22323599](http://www.uniprot.org/citations/22323599) target="_blank">22323599, PubMed: [30923826](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 (PubMed: [19026781](http://www.uniprot.org/citations/19026781) target="_blank">19026781). The PRC2/EED-EZH2 complex may also serve as a recruiting platform for DNA methyltransferases, thereby linking two epigenetic repression systems (PubMed: [16357870](http://www.uniprot.org/citations/16357870) target="_blank">16357870, PubMed: [17200670](http://www.uniprot.org/citations/17200670) target="_blank">17200670). Genes repressed by the PRC2/EED- EZH2 complex include HOXC8, HOXA9, MYT1, CDKN2A and retinoic acid target genes (PubMed: [16179254](http://www.uniprot.org/citations/16179254) target="_blank">16179254, PubMed: [18086877](http://www.uniprot.org/citations/18086877) target="_blank">18086877, PubMed: [20935635](http://www.uniprot.org/citations/20935635) target="_blank">20935635). EZH2 can also methylate non-histone proteins such as the transcription factor GATA4 and the nuclear receptor RORA (PubMed: [23063525](http://www.uniprot.org/citations/23063525) target="_blank">23063525). Regulates the circadian clock via histone methylation at the promoter of the circadian genes (PubMed: [16717091](http://www.uniprot.org/citations/16717091) target="_blank">16717091). 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 (By similarity).

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)

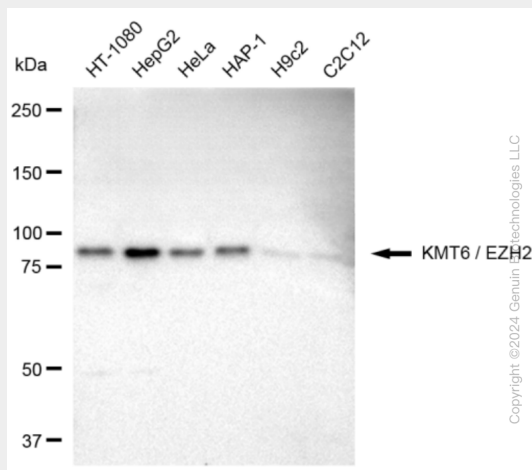
KD-Validated Anti-KMT6/EZH2 Rabbit Monoclonal Antibody - Protocols

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

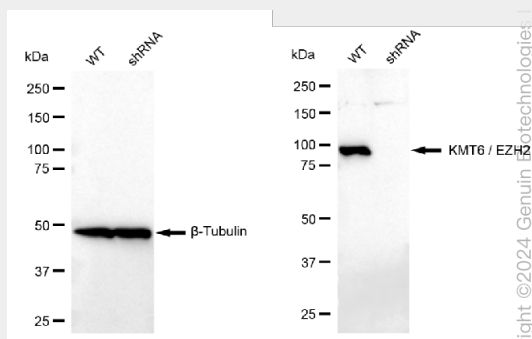
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

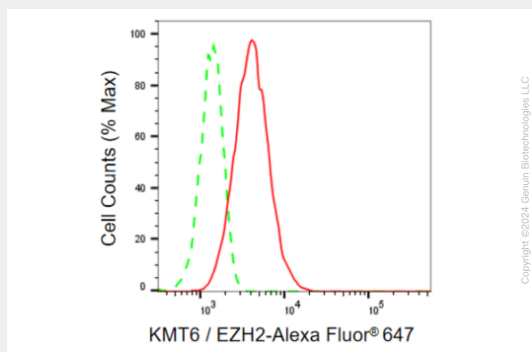
KD-Validated Anti-KMT6/EZH2 Rabbit Monoclonal Antibody - Images



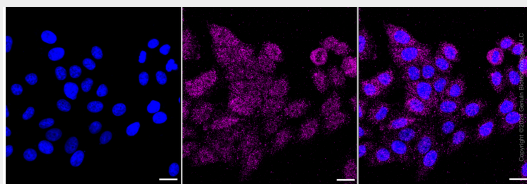
Western blotting analysis using anti-KMT6 / EZH2 antibody (Cat#AGI2399). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-KMT6 / EZH2 antibody (Cat#AGI2399, 1:10,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-KMT6 / EZH2 antibody (Cat#AGI2399). KMT6 / EZH2 expression in wild type (WT) and KMT6 / EZH2 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-KMT6 / EZH2 antibody (Cat#AGI2399, 1:10,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of KMT6 / EZH2 expression in HepG2 cells using KMT6 / EZH2 antibody (Cat#AGI2399, 1:2,000). Green, isotype control; red, KMT6 / EZH2.



Immunocytochemical staining of HepG2 cells with KMT6 / EZH2 antibody (Cat#AGI2399, 1:1,000). Nuclei were stained blue with DAPI; KMT6 / EZH2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 μ m.