

**EzH2 polyclonal antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV11373****Specification**

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**EzH2 polyclonal antibody - Product Information**

Application	CHIP, WB
Primary Accession	<a href="#">Q15910</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG

**EzH2 polyclonal antibody - Additional Information****Gene ID** 2146

Positive Control	Western blot: HeLa cells, ChIP: HeLa cells, IHC.
Application & Usage	ChIP: 2.5 µg/ChIP, Western Blot: 1:1000, IHC: 1:100 - 1:500.

**Other Names**

Enhancer of zeste homolog 2

**Target/Specificity**

EzH2

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

In PBS with 0.05% sodium azide and 0.05% ProClin 300.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

EzH2 polyclonal antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## EZH2 polyclonal 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:<a href="http://www.uniprot.org/citations/22323599" target="\_blank">22323599</a>, PubMed:<a href="http://www.uniprot.org/citations/30923826" target="\_blank">30923826</a>). 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

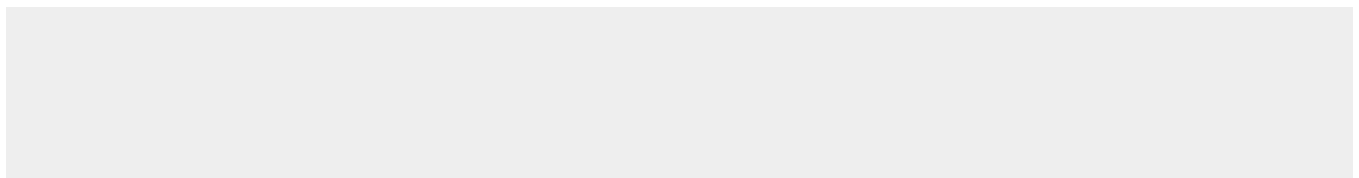
In the ovary, expressed in primordial follicles and oocytes and also in external follicle cells (at protein level) (PubMed:31451685). Expressed in many tissues (PubMed:14532106) Overexpressed in numerous tumor types including carcinomas of the breast, colon, larynx, lymphoma and testis (PubMed:14532106)

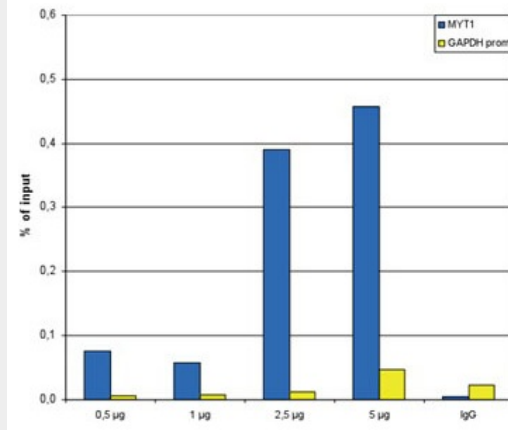
## EZH2 polyclonal antibody - Protocols

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

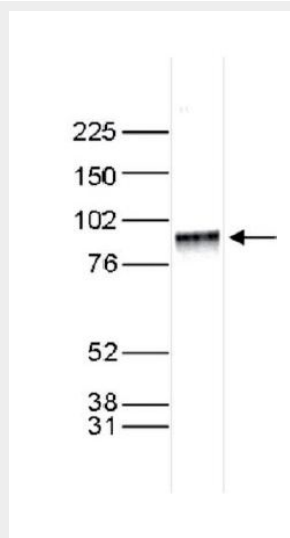
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## EZH2 polyclonal antibody - Images





ChIP assays were performed using HeLa cells, the antibody and optimized PCR primer sets for qPCR. A titration of the antibody consisting of 0.5, 1, 2.5 and 5 µg per ChIP experiment was analysed. IgG (2 µg/IP) was used as negative IP control. Quantitative PCR was performed with primers for MYT1, used as a positive control target, and for the promoter of the active GAPDH gene, used as a negative control. Figure 1 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).



Nuclear extracts of HeLa cells (40 µg) were analysed by Western blot using the antibody diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest (expected size 85 kDa) is indicated on the right; the marker (in kDa) is shown on the left.

### EZH2 polyclonal antibody - Background

EZH2 is a histone-lysine methyltransferase which methylates 'Lys-9' and 'Lys-27' of histone H3, leading to transcriptional repression. It is a member of the polycomb group (PcG) family which form multimeric protein complexes and are involved in maintaining the transcriptional repressive state of genes over successive cell generations. The EZH2 activity is dependent on the association with other components of the PRC2 complex (EED, EZH2, SUZ12/JAZ1, RBBP4 and RBBP7). EZH2 may play a role in the hematopoietic and central nervous systems. Over-expression of EZH2 is observed during advanced stages of prostate cancer and breast cancer.