

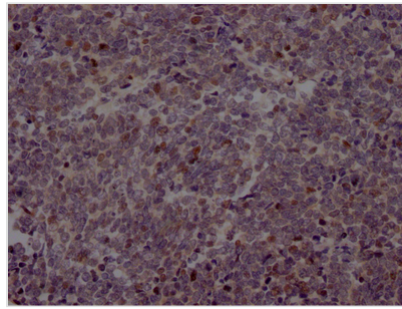


EZH2 Recombinant Monoclonal Antibody

Product Code	CSB-RA942183A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q15910
Immunogen	A synthesized peptide derived from human KMT6 / EZH2
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	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). 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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer
Gene Names	EZH2
Clone No.	2C7



Image



IHC image of CSB-RA942183A0HU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The EZH2 monoclonal antibody produced using recombinant DNA technology can be used for detecting human EZH2 protein in ELISA and IHC applications. The antibody production involves the synthesis of the gene encoding the EZH2 monoclonal antibody through sequencing the cDNA of the EZH2 antibody-generating hybridomas. The hybridomas are formed by fusing B cells isolated from an immunized animal that inoculated a synthesized peptide derived from human EZH2, with myeloma cells. The synthesized gene is then cloned into a vector and transfected into cells for cultivation. The resulting EZH2 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography.

The EZH2 protein is a histone methyltransferase and a member of the PRC2, which plays a role in gene expression regulation. Specifically, EZH2 catalyzes the methylation of histone H3 lysine 27 (H3K27), which is associated with transcriptional repression of target genes. In addition, EZH2 has also been shown to have non-histone targets, such as transcription factors and signaling molecules, and can regulate gene expression through non-catalytic mechanisms, such as protein-protein interactions. EZH2 is frequently overexpressed or mutated in cancer, where it can promote tumor growth and metastasis by repressing the expression of tumor suppressor genes and promoting the expression of genes involved in cell cycle progression and invasion.