

## EZH2 (Phospho-Ser475) Antibody

Catalog No: #SAB647

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## Description

Product Name	EZH2 (Phospho-Ser475) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	The antibody was purified from rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Applications	WB
Species Reactivity	Human, Mouse
Specificity	EZH2(Phospho-SerS475) Antibody detects endogenous levels of EZH2 only when phosphorylated at serine 475.
Immunogen Description	A synthesized peptide derived from human EZH2 around the phosphorylation site of S475.
Other Names	ENX-1, Enhancer of zeste homolog 2, Lysine N-methyltransferase 6, KMT6
Uniprot	Q15910
GeneID	2146
SDS-PAGE MW	85kDa
Concentration	1 mg/ml
Formulation	Rabbit IgG in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C/1 year

## Application Details

Western Blot: 1/500 - 1/2000

## Background

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: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-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.

Note: This product is for in vitro research use only