



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Anti-EZH2

Produced in rabbit, IgG fraction of antiserum

Catalog Number **E6906**

Product Description

Anti-EZH2 (enhancer of zeste homologue 2) is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 477–493 of human EZH2 (GeneID: 2146), conjugated to KLH via a C-terminal added cystein residue. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-EZH2 recognizes human EZH2. Applications include the detection of EZH2 by immunoblotting (100 kDa). Staining of the EZH2 band in immunoblotting is specifically inhibited with the EZH2 immunizing peptide (human, amino acids 477–493).

Polycomb protein group complexes are responsible for the regulation of hundreds of genes in mammals and insects. These proteins are responsible for the assembly and packaging of chromatin and for the induction of methylation on Histone H3. EZH2 is a member of the polycomb group of proteins and is involved in cell cycle regulation.^{1,3} EZH2 represses transcription via trimethylation of histone H3 on Lys²⁷ (H3K27) as indicated by the fact that RNAi-mediated knockdown of EZH2 resulted in a loss of H3K27 trimethylation.⁴

The expression of this protein in human tumors is aggressive for hormone refractory prostate cancer. In breast cancer EZH2 expression was increased in malignant tumors and promoted anchorage-independent and invasive growth *in vitro*. Furthermore, expression of EZH2 was associated with increased tumor diameter, negative estrogen receptor (ER) and progesterone receptor (PR) status, and advance stage of disease. Regulation of expression of EZH2 is mediated by transcription factors, for example, E2F regulates positively the level of expression of the RNA transcripts, while active p53 down-regulates the EZH2 expression through repression of the promoter.^{1,3}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: A working antibody dilution of 1:500–1:1,000 is recommended using K562 cell lysates.

Immunofluorescence: A working antibody dilution of 1:200–1:400 is recommended by staining of HEK-293T cells fixed with paraformaldehyde-triton.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Ding, L., and Kleer, C.G., *Cancer Res.*, **66**, 9352-9355 (2006).
2. Schwartz, Y.B., and Pirrotta, V., *Nature. Rev. Genet.*, **8**, 9-22 (2007).
3. Collett, K., et al., *Clin. Cancer Res.*, **12**, 1168-1174 (2006).
4. Beke, L., et al., *Oncogene*, epub January 22 (2007).

CS,EK,MAM 06/07-1

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.