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Product Information

Anti-EZH2 (N-terminal)

produced in rabbit, IgG fraction of antiserum

Catalog Number **E7031**

Product Description

Anti-EZH2 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 1-14 of human EZH2 (GeneID: 2146), conjugated to KLH via a C-terminal added cysteine 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 (N-terminal) recognizes human and mouse EZH2 by immunoblotting (100 kDa). Staining of the EZH2 band is specifically inhibited by the immunizing peptide.

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 (enhancer of zeste homologue 2) 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 associated with hormone refractory and aggressive 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 the advanced 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, or storage in "frost-free" freezers, is 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 dilution of 1:500-1:1,000 is recommended using K562 cell lysates.

Immunoblotting: a working dilution of 1:500-1:1,000 is recommended using NIH3T3 total cell lysates.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the 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., *Nat. Review Genet.*, **8**, 9-22 (2007).
3. Collet, K., et al., *Clin. Cancer Res.*, **12**, 1168-1174.
4. Beke, L., et al., *Oncogene*, epub January 22, doi: 10.1038/sj.onc.1210248 (2007)

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