



Qty: 100µg/400 µL

Rabbit anti-EZH2

Catalog No. 36-6300

Lot No.

Rabbit anti-EZH2

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is peptide-affinity purified from rabbit antiserum.

PAD: ZMD.309

IMMUNOGEN

Synthetic peptide derived from the internal region of the human EZH2 (ENX1) protein.

SPECIFICITY

This antibody reacts with the human EZH2 protein. On Western blots, it identifies bands at ~100 kDa and ~125 kDa, which may represent different isoforms of the protein.

REACTIVITY

Reactivity has been confirmed with human Jurkat T cell leukemia, PC-3 prostate adenocarcinoma, BC-1 B cell lymphoma, Nalm-6 pre-B lymphocyte and HeLa cervical adenocarcinoma cell lysates by Western blotting and with formalin-fixed, paraffin-embedded (FFPE) human breast cancer, lymphoma, and normal prostate, esophagus, pancreas, stomach, liver, and brain tissues by immunohistochemistry. Based on amino acid sequence homology, cross-reactivity with mouse is expected.

Sample	Western Blotting	ELISA	Immuno-precipitation	Immuno-histochemistry (FFPE)**
Human	+++	ND	0*	+++
Mouse	ND	ND	ND	ND
Immunogen	N/A	+++	N/A	N/A

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

* No reactivity observed for immunoprecipitation under conditions tested.

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1-1µg/mL
Western Blotting: 0.5-2 µg/mL
Immunohistochemistry:** 2 µg/mL

** For best results in immunohistochemistry with formalin-fixed, paraffin-embedded tissues, heat induced epitope retrieval (HIER) with citrate buffer, pH 6.0, is required prior to staining.

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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BACKGROUND

The *EZH2* gene is a homolog of the *Drosophila Polycomb* group (*Pc-G*) gene enhancer of zeste, which is a crucial regulator of homeotic gene expression¹ during embryonic development². The human homolog EZH2 (also known as ENX1) was initially isolated in a search for proteins that interact with Vav, a human proto-oncogene product involved in lymphocyte development and activation³. EZH2 controls B cell development through histone H3 methylation and the regulation of immunoglobulin heavy chain gene *Igh* rearrangement⁴.

EZH2 is ubiquitously expressed during early embryo genesis, and becomes restricted to the central and peripheral nervous systems and sites of fetal hematopoiesis during later development^{3,5,6,7}. In the adult, ENX-1 is restricted to the spleen, testis and placenta³. The human *EZH2* gene was originally mapped to chromosome 21⁵, but further studies showed that this is a pseudogene, and that *EZH2* actually maps to chromosome 7q35 within the critical region for malignant myeloid disorders⁸. *EZH2* and *BMI-1* genes are co expressed in Reed-Sternberg cells of Hodgkin's disease⁹. Co expression of BMI-1 and EZH2 is also associated with cycling cells and degree of malignancy in B-cell non-Hodgkin's lymphoma¹⁰.

EZH2 is involved in the progression of prostate cancer, and is also a marker that distinguishes prostate cancers at risk of lethal progression from indolent prostate cancer^{11,12}. The discovery that the transcriptional repressor EZH2 is turned on in prostate tumors as they became metastatic, leading to the silencing of many genes, suggests a new mechanism for tumor progression¹³. EZH2 has also recently been identified as a marker of aggressive breast cancer and a promoter of neoplastic transformation of breast epithelial cells¹⁴.

REFERENCES

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RELATED PRODUCTS

Product	Clone/PAD*	Cat. No.
Rabbit anti-PSMA (C-term)	ZMD.80	34-4100
Rabbit anti-PSMA (N-term)	ZMD.31	34-3200
Rabbit anti-Vav2	ZMD.278	36-2000
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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