

**EZH1 (D7D5D) Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W, IP         | H Mk        | Endogenous   | 95        | Rabbit IgG      | #Q92800     | 2145            |

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:100

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

EZH1 (D7D5D) Rabbit mAb recognizes endogenous levels of total EZH1 protein. This antibody does not cross-react with EZH2 protein.

**Species predicted to react based on 100% sequence homology**

Pig

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human EZH1 protein.

**Background**

The polycomb group (PcG) proteins are involved in maintaining the silenced state of multiple developmentally regulated genes and contribute to the maintenance of cell identity, cell cycle regulation, and oncogenesis. Enhancer of zeste homolog 1 (Ezh1), is a member of this large protein family and a subunit of the polycomb repressor complex 2 (PRC2), also containing SUZ12 and EED. Ezh1 and its paralog Ezh2 are mutually exclusive catalytic subunits of the PRC2 complex, which functions to mono-, di-, and tri-methylated Lys27 on histone H3, a mark that is associated with transcriptional repression. While EZH1 is less abundant than EZH2, it is still required for cell identity and self-renewal of embryonic stem cells (1,2). Ezh1 is also required for hematopoietic stem cell maintenance and functions to prevent a senescence-like cell cycle arrest (3). Ezh1 is required for myogenic differentiation and hepatocyte homeostasis and regeneration (4,5). While many studies have implicated Ezh2 in multiple types of cancer, a potential role for Ezh1 is less understood. However, several studies have shown dual inhibitors of Ezh1/Ezh2 to be more effective than Ezh2-specific inhibitors in treatment of multiple myeloma, prostate cancer, diffuse large B-cell lymphoma, and leukemia, suggesting an important role for Ezh1 in cancer (6-8).

**Background References**

1. Shen, X. et al. (2008) *Mol Cell* 32, 491-502.
2. Shan, Y. et al. (2017) *Nat Commun* 8, 672.
3. Hidalgo, I. et al. (2012) *Cell Stem Cell* 11, 649-62.
4. Stojic, L. et al. (2011) *Epigenetics Chromatin* 4, 16.
5. Bae, W.K. et al. (2015) *FASEB J* 29, 1653-62.
6. Rizq, O. et al. (2017) *Clin Cancer Res* 23, 4817-4830.
7. Honma, D. et al. (2017) *Cancer Sci* 108, 2069-78.
8. Xu, B. et al. (2015) *Blood* 125, 346-57.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human **Mk:** Monkey

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