

#5246 Store at -20C

Ezh2 (D2C9) XP® Rabbit mAb



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Orders: 877-616-CELL (2355)
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Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, W-S, IP, IHC-Bond, IHC-P, IF-F, IF-IC, FC- FP, ChIP, ChIP-seq, C&R, C&T	H M R Mk	Endogenous	98	Rabbit IgG	#Q15910	2146

Product Usage Information

For optimal ChIP and ChIP-seq results, use 5 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:300
IHC Leica Bond	1:50 - 1:200
Immunohistochemistry (Paraffin)	1:50
Immunofluorescence (Frozen)	1:100 - 1:400
Immunofluorescence (Immunocytochemistry)	1:100 - 1:400
Flow Cytometry (Fixed/Permeabilized)	1:100 - 1:400
Chromatin IP	1:100
Chromatin IP-seq	1:100
CUT&RUN	1:100
CUT&Tag	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.

For a carrier free (BSA and azide free) version of this product see product #16098.

Specificity / Sensitivity

Ezh2 (D2C9) XP® Rabbit mAb detects endogenous levels of total Ezh2 protein. This antibody does not cross-react with Ezh1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg354 of human Ezh2 protein.

Background

The polycomb group (PcG) proteins are involved in maintaining the silenced state of several developmentally regulated genes and contribute to the maintenance of cell identity, cell cycle regulation, and oncogenesis (1,2). Enhancer of zeste homolog 2 (Ezh2), a member of this large protein family, contains four conserved regions including domain I, domain II, and a cysteine-rich amino acid stretch that precedes the carboxy-terminal SET domain (3). The SET domain has been linked with histone methyltransferase (HMTase) activity. Moreover, mammalian Ezh2 is a member of a histone deacetylase complex that functions in gene silencing, acting at the level of chromatin structure (4). Ezh2 complexes methylate histone H3 at Lys9 and 27 *in vitro*, which is thought to be involved in targeting transcriptional regulators to specific loci (5). Ezh2 is deregulated in various tumor types, and its role, both as a primary effector and as a mediator of tumorigenesis, has become a subject of increased interest (6).

Background References

1. Sellers, W.R. and Loda, M. (2002) *Cancer Cell* 2, 349-50.
2. Visser, H.P. et al. (2001) *Br J Haematol* 112, 950-8.
3. Chen, H. et al. (1996) *Genomics* 38, 30-7.

4. Tonini, T. et al. (2004) *Oncogene* 23, 4930-7.
5. Müller, J. et al. (2002) *Cell* 111, 197-208.
6. Kleer, C.G. et al. (2003) *Proc Natl Acad Sci U S A* 100, 11606-11.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond
IHC-P: Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)
IF-IC: Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)
ChIP: Chromatin IP **ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN **C&T:** CUT&Tag

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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