

#3737 Store at -20°C

## SUZ12 (D39F6) XP® Rabbit mAb



**Cell Signaling**  
TECHNOLOGY®

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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:
WB, IP, IF-IC, FC-FP, ChIP, ChIP-seq, C&R, eCLIP	H M R Mk	Endogenous	83	Rabbit IgG	#Q15022	23512

### Product Usage Information

For optimal ChIP and ChIP-seq results, use 5 µl of antibody and 10 µg of chromatin (approximately 4 x 10<sup>6</sup> 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.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:800
Flow Cytometry (Fixed/Permeabilized)	1:100
Chromatin IP	1:100
Chromatin IP-seq	1:100
CUT&RUN	1:100
eCLIP	1:200

For more information about the RBP-eCLIP service please visit Eclipsebio.

### 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

SUZ12 (D39F6) XP® Rabbit mAb detects endogenous levels of SUZ12 protein.

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

Pig, Horse

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro257 of human Suz12 protein.

### Background

The polycomb group (PcG) proteins contribute to the maintenance of cell identity, stem cell self-renewal, cell cycle regulation and oncogenesis by maintaining the silenced state of genes that promote cell lineage specification, cell death and cell-cycle arrest (1-4). PcG proteins exist in two complexes that cooperate to maintain long-term gene silencing through epigenetic chromatin modifications. The first complex, EED-EZH2, is recruited to genes by DNA-binding transcription factors and methylates histone H3 on Lys27. Methylation of Lys27 facilitates the recruitment of the second complex, PRC1, which ubiquitinylates histone H2A on Lys119 (5). Suppressor of Zeste 12 (SUZ12) is a component of the PRC2 complex, which together with Ezh2 and Eed is absolutely required for histone methyl-transferase activity (6). SUZ12 contains a C2H2 zinc finger domain similar to the zinc finger domains found in sequence-specific DNA binding proteins and may mediate the interaction between EZH2 and nucleosomes (6). SUZ12 is overexpressed in several human tumors, including tumors of the colon, breast and liver (7,8).

### Background References

1. Boyer, L.A. et al. (2006) *Nature* 441, 349-53.
2. Lee, T.I. et al. (2006) *Cell* 125, 301-13.
3. Cao, R. et al. (2002) *Science* 298, 1039-43.
4. Müller, J. et al. (2002) *Cell* 111, 197-208.
5. Wang, H. et al. (2004) *Nature* 431, 873-8.
6. Cao, R. and Zhang, Y. (2004) *Mol Cell* 15, 57-67.

7. Kirmizis, A. et al. (2003) *Mol Cancer Ther* 2, 113-21.8. Kirmizis, A. et al. (2004) *Genes Dev* 18, 1592-605.

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>WB:</b> Western Blotting <b>IP:</b> Immunoprecipitation <b>IF-IC:</b> Immunofluorescence (Immunocytochemistry) <b>FC-FP:</b> Flow Cytometry (Fixed/Permeabilized) <b>ChIP:</b> Chromatin IP <b>ChIP-seq:</b> Chromatin IP-seq <b>C&amp;R:</b> CUT&RUN <b>eCLIP:</b> eCLIP
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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