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## SUZ12 (D39F6) XP<sup>®</sup> Rabbit mAb (PE Conjugate)

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H M R Mk	Endogenous	Rabbit IgG	#Q15022	23512

### Product Usage Information

#### Application

Flow Cytometry (Fixed/Permeabilized)

#### Dilution

1:50

### Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

### Specificity/Sensitivity

SUZ12 (D39F6) XP<sup>®</sup> Rabbit mAb (PE Conjugate) 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.

### Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometric analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated SUZ12 (D39F6) XP<sup>®</sup> Rabbit mAb #3737.

### 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.

### Species Reactivity

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

### Applications Key

**FC-FP:** Flow Cytometry (Fixed/Permeabilized)

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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