

SP1 (D4C3) Rabbit mAb (PE Conjugate)

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H Mk	Endogenous	Rabbit IgG	#P08047	6667

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

SP1 (D4C3) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total SP1 protein. It is predicted to detect all three known isoforms.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro593 of human SP1 protein (Isoform 1).

Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated SP1 (D4C3) Rabbit mAb #9389.

Background

Specificity protein 1 (SP1) is a ubiquitously expressed transcription factor belonging to the family of C2H2-type zinc finger containing DNA-binding proteins. SP1 binds GC-rich motifs with high affinity and regulates the expression of numerous mammalian genes (1,2). It interacts with many other transcription factors, such as c-Myc, EGR1, and Stat1, and with basal transcription machinery components. SP1 interacts with chromatin-modifying factors, such as histone deacetylases (HDACs) and p300 in chromatin remodeling. Transcriptional activity and stability of SP1 are regulated by post-translational modification, including phosphorylation, acetylation, ubiquitination, and glycosylation (3). Glycosylation of SP1 following insulin treatment leads to increased nuclear localization, while glucagon treatment increases cytoplasmic SP1 levels (4-6). Investigators have found high levels of SP1 in patients with Alzheimer's disease (7).

Background References

1. Kadonaga, J.T. et al. (1987) *Cell* 51, 1079-90.
2. Song, J. et al. (2003) *Int J Mol Med* 11, 547-53.
3. Tan, N.Y. and Khachigian, L.M. (2009) *Mol Cell Biol* 29, 2483-8.
4. Majumdar, G. et al. (2003) *Am J Physiol Endocrinol Metab* 285, E584-91.
5. Majumdar, G. et al. (2006) *J Biol Chem* 281, 3642-50.
6. Solomon, S.S. et al. (2008) *Life Sci* 83, 305-12.
7. Citron, B.A. et al. (2008) *J Neurosci Res* 86, 2499-504.

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 **Mk:** Monkey

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