

#9389 Store at -20°C

SP1 (D4C3) Rabbit mAb



Cell Signaling
TECHNOLOGY®

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

Support: 877-678-TECH (8324)

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, IP, IHC-P, FC-FP, ChIP, ChIP-seq, C&R	H Mk	Endogenous	90	Rabbit IgG	#P08047	6667

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.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:1000 - 1:4000
Flow Cytometry (Fixed/Permeabilized)	1:400 - 1:1600
Chromatin IP	1:100
Chromatin IP-seq	1:100
CUT&RUN	1:50

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 #84386.

Specificity / Sensitivity

SP1 (D4C3) Rabbit mAb 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).

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).

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 **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)
FC-FP: Flow Cytometry (Fixed/Permeabilized) **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq
C&R: CUT&RUN

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

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.
 Alexa Fluor is a registered trademark of Life Technologies Corporation.
 All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.