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# SP1 Antibody

Store at -20C  
#5931

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

<b>Applications:</b> W, IP	<b>Reactivity:</b> H Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 90	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P08047	<b>Entrez-Gene Id:</b> 6667
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## Product Usage Information

### Application

Western Blotting  
Immunoprecipitation

### Dilution

1:1000  
1:200

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

SP1 Antibody detects endogenous levels of total SP1 protein.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro593 of human SP1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

## 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

**W:** Western Blotting **IP:** Immunoprecipitation

## Cross-Reactivity Key

**H:** Human **Mk:** Monkey

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