

Sp4 (H-10): sc-515738



The Power to Question

BACKGROUND

The Sp transcription factor family includes Sp1, Sp2, Sp3 (SPR-2) and Sp4 (SPR-1). Sp transcription factors share similar structures but do not share similar functions. All four proteins contain a highly conserved DNA-binding domain composed of three zinc fingers at the C-terminus. Sp family members bind the consensus sequence GGGCGGGGC and other closely related sequences which are known as GC boxes. Sp1, Sp3 and Sp4 share a high affinity for GC boxes while Sp2 does not. Sp2 only weakly binds to GT boxes. Sp1, Sp2 and Sp3 are ubiquitously expressed, while Sp4 is abundantly expressed in brain with limited expression in other tissues. Sp1 and Sp3, but not Sp2 or Sp4, interact with E2, a regulatory element for the $\beta 4$ subunit of neuronal nicotinic acetylcholine receptors. Sp3 is the only Sp member to inhibit Sp1 and Sp4 mediated transcription.

REFERENCES

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2. Hagen, G., et al. 1992. Cloning by recognition site screening of two novel GT box binding proteins: a family of Sp1 related genes. *Nucleic Acids Res.* 20: 5519-5525.
3. Kingsley, C. et al. 1992. Cloning of GT box-binding proteins: a novel Sp1 multigene family regulating T-cell receptor gene expression. *Mol. Cell Biol.* 12: 4251-4261.
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6. Kalf-Suske, M., et al. 1996. Human Sp3 transcriptional regulator gene (SP3) maps to chromosome 2q31. *Genomics* 37: 410-412.
7. Bigger, C.B., et al. 1997. Sp1 and Sp3 regulate expression of the neuronal nicotinic acetylcholine receptor $\beta 4$ subunit gene. *J. Biol. Chem.* 272: 25976-25982.
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CHROMOSOMAL LOCATION

Genetic locus: SP4 (human) mapping to 7p15.3; Sp4 (mouse) mapping to 12 F2.

SOURCE

Sp4 (H-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 758-780 at the C-terminus of Sp4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-515738 X, 200 μ g/0.1 ml.

APPLICATIONS

Sp4 (H-10) is recommended for detection of Sp4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

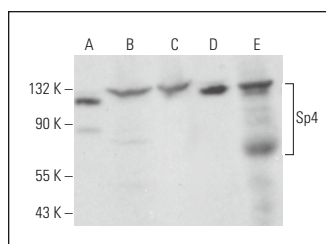
Suitable for use as control antibody for Sp4 siRNA (h): sc-36545, Sp4 siRNA (m): sc-36546, Sp4 siRNA (r): sc-270068, Sp4 shRNA Plasmid (h): sc-36545-SH, Sp4 shRNA Plasmid (m): sc-36546-SH, Sp4 shRNA Plasmid (r): sc-270068-SH, Sp4 shRNA (h) Lentiviral Particles: sc-36545-V, Sp4 shRNA (m) Lentiviral Particles: sc-36546-V and Sp4 shRNA (r) Lentiviral Particles: sc-270068-V.

Sp4 (H-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

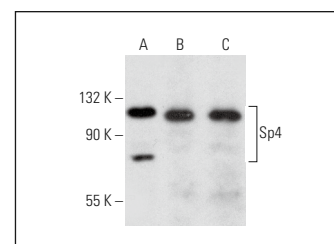
Molecular Weight of Sp4: 80-110 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

DATA



Sp4 (H-10): sc-515738. Western blot analysis of Sp4 expression in CCRF-CEM (A), HEL 92.1.7 (B) and TK-1 (C) whole cell lysates, KNRK nuclear extract (D) and rat thymus tissue extract (E).



Sp4 (H-10): sc-515738. Western blot analysis of Sp4 expression in Jurkat (A), HeLa (B) and SUP-T1 (C) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.