

Sp2 (H-282): sc-11400

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 GGGGCGGGC 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 b4 subunit of neuronal nicotinic acetylcholine receptors. Sp3 is the only Sp member to inhibit Sp1 and Sp4 mediated transcription. The gene3 encoding human Sp2 maps to chromosome 17q21.32.

REFERENCES

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- 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.
- 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.
- Hagen, G., et al. 1994. Sp1-mediated transcriptional activation is repressed by Sp3. *EMBO J.* 13: 3843-3851.
- Hagen, G., et al. 1995. Functional analyses of the transcription factor Sp4 reveal properties distinct from Sp1 and Sp3. *J. Biol. Chem.* 270: 24989-24994.
- Bigger, C.B., et al. 1997. Sp1 and Sp3 regulate expression of the neuronal nicotinic acetylcholine receptor beta4 subunit gene. *J. Biol. Chem.* 272: 25976-25982.

CHROMOSOMAL LOCATION

Genetic locus: SP2 (human) mapping to 17q21.32.

SOURCE

Sp2 (H-282) is a rabbit polyclonal antibody raised against amino acids 154-435 of Sp2 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-11400 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

Sp2 (H-282) is recommended for detection of Sp2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Sp2 (H-282) is also recommended for detection of Sp2 in additional species, including bovine and canine.

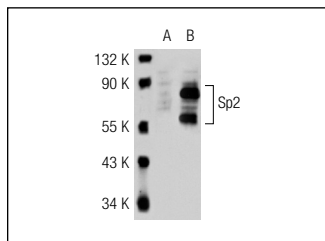
Suitable for use as control antibody for Sp2 siRNA (h): sc-29489, Sp2 shRNA Plasmid (h): sc-29489-SH and Sp2 shRNA (h) Lentiviral Particles: sc-29489-V.

Sp2 (H-282) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Sp2: 80 kDa.

Positive Controls: Sp2 (h): 293T Lysate: sc-113315, K-562 nuclear extract: sc-2130 or A-673 nuclear extract: sc-2128.

DATA



Sp2 (H-282): sc-11400. Western blot analysis of Sp2 expression in non-transfected: sc-117752 (A) and human Sp2 transfected: sc-113315 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Knofler, M., et al. 2004. Transcriptional regulation of the human chorionic Gonadotropin β gene during villous trophoblast differentiation. *Endocrinology* 145: 1685-1694.

STORAGE

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

PROTOCOLS

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


 MONOS
Satisfation
Guaranteed

Try **Sp2 (A-8): sc-17814** or **Sp2 (G-7): sc-55487**, our highly recommended monoclonal alternatives to Sp2 (H-282).