

Sp2 (A-8): sc-17814

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 GGGGCGGGGC 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. The gene3 encoding human Sp2 maps to chromosome 17p32.3.

REFERENCES

- Kadonaga, J.T., et al. 1988. Promoter-selective activation of transcription by Sp1. In Cullen, B.R. and Wong-Staal, F., eds. *The Control of Human Retrovirus Gene Expression*. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press, 239-250.
- 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.

SELECT PRODUCT CITATIONS

Genetic locus: SP2 (human) mapping to 17q21.32; Sp2 (mouse) mapping to 11 D.

SOURCE

Sp2 (A-8) is a mouse monoclonal antibody raised against amino acids 154-435 of Sp2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain 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-17814 X, 200 μ g/0.1 ml.

Sp2 (A-8) is available conjugated to agarose (sc-17814 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17814 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17814 PE), fluorescein (sc-17814 FITC), Alexa Fluor® 488 (sc-17814 AF488), Alexa Fluor® 546 (sc-17814 AF546), Alexa Fluor® 594 (sc-17814 AF594) or Alexa Fluor® 647 (sc-17814 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17814 AF680) or Alexa Fluor® 790 (sc-17814 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Sp2 (A-8) is recommended for detection of Sp2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

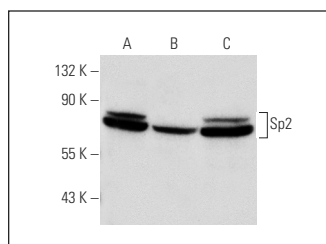
Suitable for use as control antibody for Sp2 siRNA (h): sc-29489, Sp2 siRNA (m): sc-36543, Sp2 shRNA Plasmid (h): sc-29489-SH, Sp2 shRNA Plasmid (m): sc-36543-SH, Sp2 shRNA (h) Lentiviral Particles: sc-29489-V and Sp2 shRNA (m) Lentiviral Particles: sc-36543-V.

Sp2 (A-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Sp2: 80 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or KNRK whole cell lysate: sc-2214.

DATA



Sp2 (A-8): sc-17814. Western blot analysis of Sp2 expression in KNRK (A), NIH/3T3 (B) and Jurkat (C) nuclear extracts.

SELECT PRODUCT CITATIONS

- Christophe-Hobertus, C. and Christophe, D. 2010. Delimitation and functional characterization of the bidirectional THOX-DUOXA promoter regions in thyrocytes. *Mol. Cell. Endocrinol.* 317: 161-167.
- Sugiaman-Trapman, D., et al. 2018. Characterization of the human RFX transcription factor family by regulatory and target gene analysis. *BMC Genomics* 19: 181.
- MacBeth, M., et al. 2021. Plasticity of naturally occurring regulatory T cells in allergic airway disease is modulated by the transcriptional activity of Il-6. *Int. J. Mol. Sci.* 22: 4582.

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 for detailed protocols and support products.

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