SANTA CRUZ BIOTECHNOLOGY, INC.

Sp1 (H-225): sc-14027

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sp1 is a sequence-specific transcription factor that recognizes GGGGCGGGGC and closely related sequences, which are often referred to as GC boxes. Sp1 was initially identified as a HeLa cell-derived factor that selectively activates *in vitro* transcription from the SV40 promoter and binds to the multiple GC boxes in the 21 bp repeated elements in SV40. The sequence specificity of DNA binding is conferred by Zn (II) fingers, whereas a different region of Sp1 appears to regulate the affinity of DNA binding. Sp1 belongs to a subgroup of transcription factors that are phosphorylated upon binding to promoter sequences. Evidence suggests that the early growth response gene, Erg-1 (also known as Zif268 or NGF1-A), may downregulate certain mammalian gene promoters by competing with Sp1 for binding to an overlapping binding motif. The gene encoding human Sp1 maps to chromosome 12q13.13.

CHROMOSOMAL LOCATION

Genetic locus: SP1 (human) mapping to 12q13.13; Sp1 (mouse) mapping to 15 F3.

SOURCE

Sp1 (H-225) is a rabbit polyclonal antibody raised against amino acids 121-345 mapping near the N-terminus of Sp1 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-14027 X, 200 µg/0.1 ml.

APPLICATIONS

Sp1 (H-225) is recommended for detection of Sp1 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Sp1 (H-225) is also recommended for detection of Sp1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Sp1 siRNA (h): sc-29487, Sp1 siRNA (m): sc-29488, Sp1 shRNA Plasmid (h): sc-29487-SH, Sp1 shRNA Plasmid (m): sc-29488-SH, Sp1 shRNA (h) Lentiviral Particles: sc-29487-V and Sp1 shRNA (m) Lentiviral Particles: sc-29488-V.

Sp1 (H-225) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Sp1: 106 kDa.

Positive Controls: K-562 nuclear extract: sc-2130.

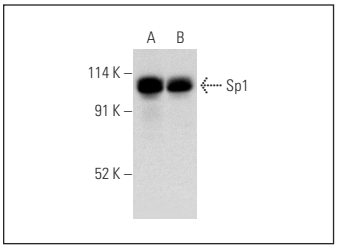
RESEARCH USE

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

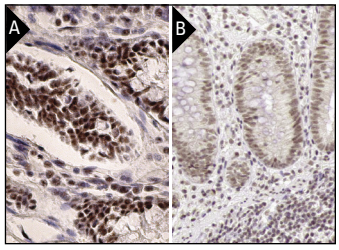
STORAGE

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

DATA



Sp1 (H-225): sc-14027. Western blot analysis of Sp1 expression in K-562 (**A**) and HeLa (**B**) nuclear extracts.



Sp1 (H-225): sc-14027. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing nuclear staining of glandular and lymphoid cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Liu, H., et al. 2002. Maximal induction of a subset of interferon target genes requires the chromatin-remodeling activity of the BAF complex. Mol. Cell. Biol. 22: 6471-6479.
2. Gardner, L., et al. 2011. Geminin overexpression prevents the completion of topoisomerase IIα chromosome decatenation, leading to aneuploidy in human mammary epithelial cells. Breast Cancer Res. 13: R53.
3. Liu, W.H., et al. 2011. Fas/Fas_L-dependent and -independent activation of caspase-8 in doxorubicin-treated human breast cancer MCF-7 cells: ADAM10 down-regulation activates Fas/Fas_L signaling pathway. Int. J. Biochem. Cell Biol. 43: 1708-1719.
4. Kim, J., et al. 2012. *In vivo* regulation of the heme oxygenase-1 gene in humanized transgenic mice. Kidney Int. 82: 278-291.
5. Chen, C., et al. 2012. Modulation of IFN-γ receptor 1 expression by AP-2α influences IFN-γ sensitivity of cancer cells. Am. J. Pathol. 180: 661-671.
6. Okoro, E.U., et al. 2012. Apolipoprotein E4 is deficient in inducing macrophage ABCA1 expression and stimulating the Sp1 signaling pathway. PLoS ONE 7: e44430.
7. Liu, W.H., et al. 2012. Suppression of Akt/Foxp3-mediated miR-183 expression blocks Sp1-mediated ADAM17 expression and TNFα-mediated NFκB activation in piceatannol-treated human leukemia U937 cells. Biochem. Pharmacol. 84: 670-680.