SANTA CRUZ BIOTECHNOLOGY, INC.

NF-1 (F-2): sc-398751

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NF-1, also designated CTF, consists of a family of CCAAT box binding proteins that stimulate DNA replication and activate transcription. Analysis of human NF-1 messenger RNA has revealed two forms of the NF-1 protein arising from an alternate splicing of a single NF-1 gene. NF-1 binds its consensus DNA element as a homodimer via an amino-terminal DNA binding domain, and activates transcription through a putatively novel, proline-rich, carboxy terminal transactivation domain. The NF-1 protein has been shown to recognize and bind the adenovirus type 2 promoter and activate transcription of herpes simplex virus thymidine kinase genes. The NF-1 consensus element has been found in the upstream promoter region of myriad eukaryotic genes, including that of Ha-Ras, α-globin, HSP 70, GRP 78, Histone H1, myelin basic protein and in the *Xenopus laevis* vitellogenin gene promoter.

REFERENCES

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2. Morgan, W.D., et al. 1987. Two transcriptional activators, CCAAT-box-binding transcription factor and heat shock transcription factor, interact with a human hsp70 gene promoter. Mol. Cell. Biol. 7: 1129-1138.
3. Santoro, C., et al. 1988. A family of CCAAT-box-binding proteins active in transcription and DNA replication: cloning and expression of multiple cDNAs. Nature 334: 218-224.
4. Mermod, N., et al. 1989. The proline-rich transcriptional activator of CTF/NF-I is distinct from the replication and DNA binding domain. Cell 58: 741-753.
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7. Dusserre, Y. and Mermod, N. 1992. Purified cofactors and Histone H1 mediate transcriptional regulation by CTF/NF-I. Mol. Cell. Biol. 12: 5228-5237.
8. Cardinaux, J.R., et al. 1994. Complex organization of CTF/NF-I, C/EBP, and HNF3 binding sites within the promoter of the liver-specific vitellogenin gene. J. Biol. Chem. 269: 32947-32956.
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SOURCE

NF-1 (F-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-31 at the N-terminus of NF-1 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_1 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-398751 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-376622 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NF-1 (F-2) is recommended for detection of all NF-1 isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

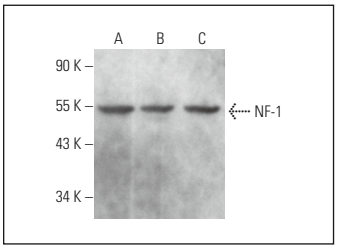
Suitable for use as control antibody for NF-1 siRNA (h): sc-43561, NF-1 siRNA (m): sc-43562, NF-1 shRNA Plasmid (h): sc-43561-SH, NF-1 shRNA Plasmid (m): sc-43562-SH, NF-1 shRNA (h) Lentiviral Particles: sc-43561-V and NF-1 shRNA (m) Lentiviral Particles: sc-43562-V.

NF-1 (F-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

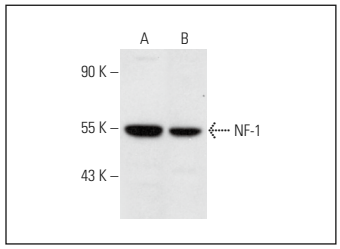
Molecular Weight of NF-1: 55 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, Sol8 cell lysate: sc-2249 or KNRK nuclear extract: sc-2141.

DATA



NF-1 (F-2): sc-398751. Western blot analysis of NF-1 expression in L929 (**A**), Sol8 (**B**) and RAT2 (**C**) whole cell lysates.



NF-1 (F-2): sc-398751. Western blot analysis of NF-1 expression in NIH/3T3 (**A**) and KNRK (**B**) nuclear extracts.

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.