SANTA CRUZ BIOTECHNOLOGY, INC.

NF-1 (A-12): sc-74445

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

1. Jones, K.A., et al. 1987. A cellular DNA-binding protein that activates eukaryotic transcription and DNA replication. Cell 48: 79-89.
2. Morgan, W.D., et al. 1987. Two transcriptional activators, CCAAT-box-binding transcription factor and heat shock transcription factor, interact with a human HSP 70 gene promoter. Mol. Cell. Biol. 7: 1129-1138.

SOURCE

NF-1 (A-12) is a mouse monoclonal antibody raised against amino acids 1-300 of NF-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-74445 X, 200 µg/0.1 ml.

APPLICATIONS

NF-1 (A-12) 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), 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).

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 (A-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

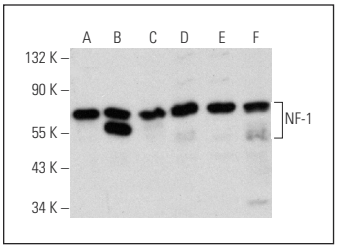
Molecular Weight of NF-1: 55 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, A-431 whole cell lysate: sc-2201 or Sol8 cell lysate: sc-2249.

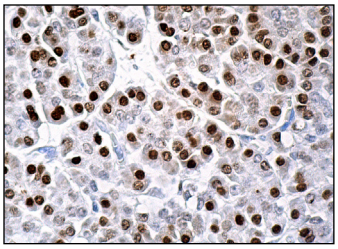
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NF-1 (A-12): sc-74445. Western blot analysis of NF-1 expression in MCF7 (**A**), A-431 (**B**), L929 (**C**), Sol8 (**D**), KNRK (**E**) and L8 (**F**) whole cell lysates.



NF-1 (A-12): sc-74445. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Shehu, A., et al. 2011. The stimulation of HSD17B7 expression by estradiol provides a powerful feed-forward mechanism for estradiol biosynthesis in breast cancer cells. Mol. Endocrinol. 25: 754-766.
2. Pasutto, F., et al. 2017. Pseudoexfoliation syndrome-associated genetic variants affect transcription factor binding and alternative splicing of LOXL1. Nat. Commun. 8: 15466.
3. Hu, W., et al. 2019. Patient adipose stem cell-derived adipocytes reveal genetic variation that predicts antidiabetic drug response. Cell Stem Cell 24: 299-308.

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.