SANTA CRUZ BIOTECHNOLOGY, INC.

NF-1 (H-300): sc-5567

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.

SOURCE

NF-1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of NF-1 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-5567 X, 200 µg/0.1 ml.

APPLICATIONS

NF-1 (H-300) is recommended for detection of all NF-1 isoforms 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).

NF-1 (H-300) is also recommended for detection of all NF-1 isoforms in additional species, including canine, bovine and porcine.

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 (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NF-1: 55 kDa.

Positive Controls: NF-1 (h): 293T Lysate: sc-159124, HeLa + PMA nuclear extract: sc-2121 or HeLa + PMA cell lysate: sc-2258.

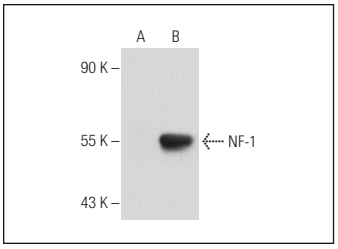
STORAGE

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

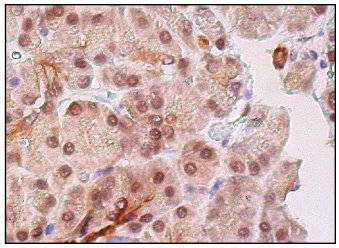
RESEARCH USE

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

DATA



NF-1 (H-300): sc-5567. Western blot analysis of NF-1 expression in non-transfected: sc-117752 (**A**) and human NF-1 transfected: sc-159124 (**B**) 293T whole cell lysates.



NF-1 (H-300): sc-5567. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Tone, M., et al. 2003. Mouse glucocorticoid-induced tumor necrosis factor receptor ligand is costimulatory for T cells. Proc. Natl. Acad. Sci. USA 100: 15059-15064.
2. Gao, N., et al. 2003. The role of hepatocyte nuclear factor-3α (Forkhead Box A1) and androgen receptor in transcriptional regulation of prostatic genes. Mol. Endocrinol. 17: 1484-1507.
3. Yeung, L.H., et al. 2003. Identification and characterization of a prostate-specific androgen-independent protein-binding site in the probasin promoter. Biochem. J. 371: 843-855.
4. Waki, H., et al. 2011. Global mapping of cell type-specific open chromatin by FAIRE-seq reveals the regulatory role of the NFI family in adipocyte differentiation. PLoS Genet. 7: e1002311.
5. Wang, W., et al. 2011. Temporal control of a dendritogenesis-linked gene via REST-dependent regulation of nuclear factor I occupancy. Mol. Biol. Cell 22: 868-879.
6. Landreville, S., et al. 2011. Suppression of α5 gene expression is closely related to the tumorigenic properties of uveal melanoma cell lines. Pigment Cell Melanoma Res. 24: 643-655.
7. Pjanic, M., et al. 2011. Nuclear factor I revealed as family of promoter binding transcription activators. BMC Genomics 12: 181.
8. 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.