

NF-1 (D-2): sc-74444

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 (D-2) is a mouse monoclonal antibody raised against amino acids 1-300 of NF-1 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-74444 X, 200 μ g/0.1 ml.

NF-1 (D-2) is available conjugated to agarose (sc-74444 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74444 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74444 PE), fluorescein (sc-74444 FITC), Alexa Fluor[®] 488 (sc-74444 AF488), Alexa Fluor[®] 546 (sc-74444 AF546), Alexa Fluor[®] 594 (sc-74444 AF594) or Alexa Fluor[®] 647 (sc-74444 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-74444 AF680) or Alexa Fluor[®] 790 (sc-74444 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

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

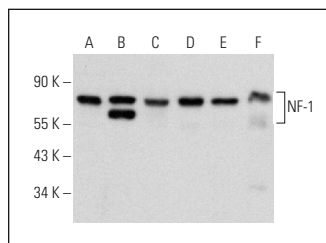
Molecular Weight of NF-1: 55 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, A-431 whole cell lysate: sc-2201 or RAT2 whole cell lysate: sc-364198.

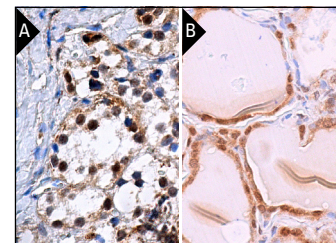
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NF-1 (D-2): sc-74444. Western blot analysis of NF-1 expression in MCF7 (A), A-431 (B), L929 (C), Sol8 (D), RAT2 (E) and L8 (F) whole cell lysates.



NF-1 (D-2): sc-74444. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing nuclear staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Zhang, J., et al. 2019. Excessive miR-25-3p maturation via N⁶-methyladenosine stimulated by cigarette smoke promotes pancreatic cancer progression. *Nat. Commun.* 10: 1858.
- Wang, X., et al. 2019. NF-1 loss promotes Kras-driven lung adenocarcinoma and results in Psat1-mediated glutamate dependence. *EMBO Mol. Med.* 11: e9856.
- Guièze, R., et al. 2019. Mitochondrial reprogramming underlies resistance to Bcl-2 inhibition in lymphoid malignancies. *Cancer Cell* 36: 369-384.
- Bah, I., et al. 2020. HuR promotes miRNA-mediated upregulation of NF1-A protein expression in MDSCs during murine sepsis. *Mol. Immunol.* 123: 97-105.
- Yu, H., et al. 2022. Maternal diabetes-mediated RORA suppression in mice contributes to autism-like offspring through inhibition of aromatase. *Commun. Biol.* 5: 51.

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.