

# NF-1 (G-18): sc-30918

## 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,  $\alpha$ -globin, hsp70, 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 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-1 is distinct from the replication and DNA binding domain. *Cell* 58: 741-753.
5. Inoue, T., et al. 1990. Isolation of complementary DNAs encoding a cerebellum-enriched nuclear factor I family that activates transcription from the mouse myelin basic protein promoter. *J. Biol. Chem.* 265: 19065-19070.
6. Wooden, S.K., et al. 1991. Transactivation of the grp78 promoter by mal-folded proteins, glycosylation block, and calcium ionophore is mediated through a proximal region containing a CCAAT motif which interacts with CTF/NF-1. *Mol. Cell. Biol.* 11: 5612-5623.
7. Dusserre, Y. et al. 1992. Purified cofactors and histone H1 mediate transcriptional regulation by CTF/NF-1. *Mol. Cell. Biol.* 12: 5228-5237.

## SOURCE

NF-1 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NF-1A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30918 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

NF-1 (G-18) is recommended for detection of all isoforms of NF-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

NF-1 (G-18) is also recommended for detection of all isoforms of NF-1 in additional species, including equine, canine, bovine, porcine and avian.

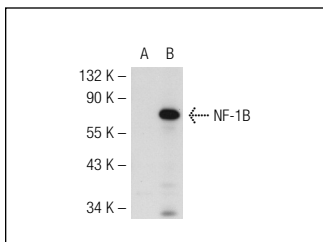
Molecular Weight of NF-1: 55 kDa.

Positive Controls: NF-1B (m): 293T Lysate: sc-125698, Jurkat whole cell lysate: sc-2204 or NIH/3T3 whole cell lysate: sc-2210.

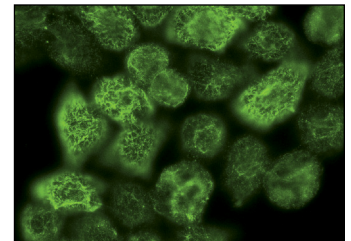
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



NF-1 (G-18): sc-30918. Western blot analysis of NF-1B expression in non-transfected: sc-117752 (A) and mouse NF-1B transfected: sc-125698 (B) 293T whole cell lysates.



NF-1 (G-18): sc-30918. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

## RESEARCH USE

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

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Try **NF-1 (D-2): sc-74444**, our highly recommended monoclonal alternative to NF-1A (G-18).