SANTA CRUZ BIOTECHNOLOGY, INC.

NF-1C (4E10-D8-F4): sc-517555



BACKGROUND

The NF-1 family of CCAAT box binding proteins function to stimulate DNA replication and activate transcription. NF-1C (nuclear factor I/C), a member of the NF-1 family, is a 508 amino acid protein that localizes to the nucleus and contains one CTF/NF-I DNA-binding domain. Existing as a homodimer that is able to bind DNA, NF-1C recognizes and binds to the palindromic sequence 5'-TTGGCNNNNNGCCAA-3' (a sequence that is common in both cellular and viral promoters) and, via this binding, plays a role in transcription and replication. NF-1C may participate in TGF β signaling, extracellular matrix deposition and skin appendage pathologies. Existing as five alternatively spliced isoforms, NF-1C is expressed in numerous tissues including brain, liver, spleen and heart.

REFERENCES

- Qian, F., Kruse, U., Lichter, P. and Sippel, A.E. 1995. Chromosomal localization of the four genes (NFIA, B, C, and X) for the human transcription factor nuclear factor I by FISH. Genomics 28: 66-73.
- Leahy, P., Crawford, D.R., Grossman, G., Gronostajski, R.M. and Hanson, R.W. 1999. CREB binding protein coordinates the function of multiple transcription factors including nuclear factor I to regulate phosphoenolpyruvate carboxykinase (GTP) gene transcription. J. Biol. Chem. 274: 8813-8822.
- 3. Lin, C.J., Martens, J.W. and Miller, W.L. 2001. NF-1C, Sp1, and Sp3 are essential for transcription of the human gene for P450c17 (steroid 17 α -hydroxylase/17,20 lyase) in human adrenal NCI-H295A cells. Mol. Endocrinol. 15: 1277-1293.
- Norquay, L.D., Yang, X., Sheppard, P., Gregoire, S., Dodd, J.G., Reith, W. and Cattini, P.A. 2003. RFX1 and NF-1 associate with P sequences of the human growth hormone locus in pituitary chromatin. Mol. Endocrinol. 17: 1027-1038.
- Wang, W., Stock, R.E., Gronostajski, R.M., Wong, Y.W., Schachner, M. and Kilpatrick, D.L. 2004. A role for nuclear factor I in the intrinsic control of cerebellar granule neuron gene expression. J. Biol. Chem. 279: 53491-53497.
- 6. Gaudreault, M., Vigneault, F., Gingras, M.E., Leclerc, S., Carrier, P., Germain, L. and Guerin, S.L. 2008. Transcriptional regulation of the human α 6 integrin gene by the transcription factor NFI during corneal wound healing. Invest. Ophthalmol. Vis. Sci. 49: 3758-3767.
- Perez-Casellas, L.A., Wang, X., Howard, K.D., Rehage, M.W., Strong, D.D. and Linkhart, T.A. 2009. Nuclear factor I transcription factors regulate IGF binding protein 5 gene transcription in human osteoblasts. Biochim. Biophys. Acta 1789: 78-87.
- Lamani, E., Wu, Y., Dong, J., Litaker, M.S., Acevedo, A.C. and MacDougall, M. 2009. Tissue- and cell-specific alternative splicing of NFIC. Cells Tissues Organs 189: 105-110.
- Plasari, G., Calabrese, A., Dusserre, Y., Gronostajski, R.M., McNair, A., Michalik, L. and Mermod, N. 2009. Nuclear factor I-C links platelet-derived growth factor and transforming growth factor β1 signaling to skin wound healing progression. Mol. Cell. Biol. 29: 6006-6017.

CHROMOSOMAL LOCATION

Genetic locus: NFIC (human) mapping to 19p13.3; Nfic (mouse) mapping to 10 C1.

SOURCE

NF-1C (4E10-D8-F4) is a mouse monoclonal antibody raised against recombinant NF-1C protein fragments of human origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NF-1C (4E10-D8-F4) is recommended for detection of NF-1C of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NF-1C siRNA (h): sc-36044, NF-1C siRNA (m): sc-149940, NF-1C shRNA Plasmid (h): sc-36044-SH, NF-1C shRNA Plasmid (m): sc-149940-SH, NF-1C shRNA (h) Lentiviral Particles: sc-36044-V and NF-1C shRNA (m) Lentiviral Particles: sc-149940-V.

Molecular Weight of NF-1C: 57 kDa.

STORAGE

Store at 4° C, **D0 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.