

NFATc4 (C-20): sc-1153

BACKGROUND

NFATc4 (nuclear factor of activated T cells, cytoplasmic, calcineurin-dependent 4) is a member of the nuclear factors of activated T cells DNA-binding transcription complex that influences cytokine gene expression, cardiac hypertrophy and adipocyte differentiation. This complex consists of at least two components, a cytosolic component that translocates to the nucleus upon T cell receptor (TCR) stimulation and an inducible nuclear component. Other members of this family participate in the formation of this complex. NFATc4 plays a role in the inducible expression of cytokine genes in T cells, including the induction of IL-2 and IL-4. p38 MAP kinase phosphorylates multiple residues in the NFAT homology domain of NFATc4.

CHROMOSOMAL LOCATION

Genetic locus: NFATC4 (human) mapping to 14q12; Nfatc4 (mouse) mapping to 14 C3.

SOURCE

NFATc4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of NFATc4 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1153 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-1153 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NFATc4 (C-20) is recommended for detection of NFATc4 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).

NFATc4 (C-20) is also recommended for detection of NFATc4 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for NFATc4 siRNA (h): sc-38115, NFATc4 siRNA (m): sc-38116, NFATc4 shRNA Plasmid (h): sc-38115-SH, NFATc4 shRNA Plasmid (m): sc-38116-SH, NFATc4 shRNA (h) Lentiviral Particles: sc-38115-V and NFATc4 shRNA (m) Lentiviral Particles: sc-38116-V.

NFATc4 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of dephosphorylated NFATc4: 140 kDa.

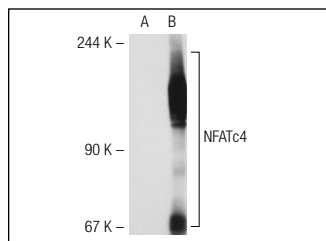
Molecular Weight of hyperphosphorylated NFATc4: 160 kDa.

Positive Controls: NFATc4 (m): 293T Lysate: sc-122039 or A-10 cell lysate: sc-3806.

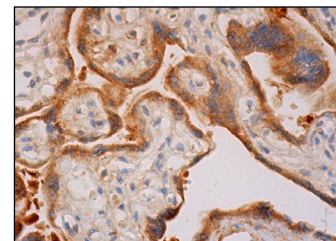
STORAGE

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

DATA



NFATc4 (C-20): sc-1153. Western blot analysis of NFATc4 expression in non-transfected: sc-117752 (A) and mouse NFATc4 transfected: sc-122039 (B) 293T whole cell lysates.



NFATc4 (C-20): sc-1153. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

- Semsarian, C., et al. 1999. Skeletal muscle hypertrophy is mediated by a Ca²⁺-dependent calcineurin signaling pathway. *Nature* 400: 576-581.
- Eckstein, L.A., et al. 2005. Cyclosporin a inhibits calcineurin/nuclear factor of activated T-cells signaling and induces apoptosis in retinoblastoma cells. *Invest. Ophthalmol. Vis. Sci.* 46: 782-790.
- Li, G.D., et al. 2008. CHP2 activates the calcineurin/nuclear factor of activated T cells signaling pathway and enhances the oncogenic potential of HEK293 cells. *J. Biol. Chem.* 283: 32660-32668.
- Gurda, G.T., et al. 2008. Cholecystokinin activates pancreatic calcineurin-NFAT signaling *in vitro* and *in vivo*. *Mol. Biol. Cell* 19: 198-206.
- Nguyen, T., et al. 2009. NFAT-3 is a transcriptional repressor of the growth-associated protein 43 during neuronal maturation. *J. Biol. Chem.* 284: 18816-18823.
- Aimo, L., et al. 2010. Gestational zinc deficiency affects the regulation of transcription factors AP-1, NFκB and NFAT in fetal brain. *J. Nutr. Biochem.* 21: 1069-1075.
- Ding, B., et al. 2013. Temporal regulation of nuclear factor one occupancy by calcineurin/NFAT governs a voltage-sensitive developmental switch in late maturing neurons. *J. Neurosci.* 33: 2860-2872.

RESEARCH USE

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



Try **NFATc4 (B-2): sc-271597** or **NFATc4 (F-4): sc-515584**, our highly recommended monoclonal alternatives to NFATc4 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **NFATc4 (B-2): sc-271597**.