

# NFATc4 (I-8): sc-32989

## 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.

## REFERENCES

1. Yang, T., et al. 2001. Requirement of two NFATc4 transactivation domains for CBP potentiation. *J. Biol. Chem.* 276: 39569-39576.
2. Yang, T.T., et al. 2002. Phosphorylation of NFATc4 by p38 mitogen-activated protein kinases. *Mol. Cell. Biol.* 22: 3892-3904.
3. Wilkins, B.J., et al. 2002. Targeted disruption of NFATc3, but not NFATc4, reveals an intrinsic defect in calcineurin-mediated cardiac hypertrophic growth. *Mol. Cell. Biol.* 22: 7603-7613.
4. Graef, I.A., et al. 2003. Neurotrophins and netrins require calcineurin/NFAT signaling to stimulate outgrowth of embryonic axons. *Cell* 113: 657-670.
5. Mathew, S., et al. 2004. A ternary complex of transcription factors, Nished and NFATc4, and co-activator p300 bound to an intronic sequence, intronic regulatory element, is pivotal for the upregulation of Myosin light chain-2v gene in cardiac hypertrophy. *J. Biol. Chem.* 279: 41018-41027.

## CHROMOSOMAL LOCATION

Genetic locus: *Nfatc4* (mouse) mapping to 14 C3.

## SOURCE

NFATc4 (I-8) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of NFATc4 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32989 P, (100 µg 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.

## RESEARCH USE

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

## APPLICATIONS

NFATc4 (I-8) is recommended for detection of NFATc4 SP-2 domain of mouse and rat 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), 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 NFATc4 siRNA (m): sc-38116, NFATc4 shRNA Plasmid (m): sc-38116-SH and NFATc4 shRNA (m) Lentiviral Particles: sc-38116-V.

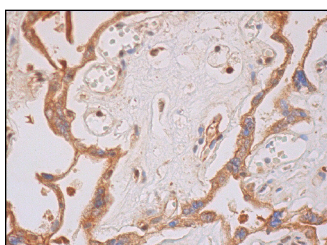
Molecular Weight of NFATc4: 140-160 kDa.

Positive Controls: A-10 cell lysate: sc-3806.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



NFATc4 (I-8): sc-32989. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and nuclear staining of decidual cells.

## SELECT PRODUCT CITATIONS

1. Gómez-Sintes, R. and Lucas, J.J. 2010. NFAT/Fas signaling mediates the neuronal apoptosis and motor side effects of GSK-3 inhibition in a mouse model of lithium therapy. *J. Clin. Invest.* 120: 2432-2445.

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Try **NFATc4 (B-2): sc-271597**, our highly recommended monoclonal alternative to NFATc4 (I-8). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **NFATc4 (B-2): sc-271597**.