SANTA CRUZ BIOTECHNOLOGY, INC.

NFATc4 (L-9): sc-32985

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The Power to Question

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.
6. Jayanthi, S., et al. 2005. Calcineurin/NFAT-induced upregulation of the FAS ligand/FAS death pathway is involved in methamphetamine-induced neuronal apoptosis. Proc. Natl. Acad. Sci. USA 102: 868-873.

CHROMOSOMAL LOCATION

Genetic locus: NFATC4 (human) mapping to 14q11.2; Nfatc4 (mouse) mapping to 14.

SOURCE

NFATc4 (L-9) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of NFATc4 of human 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-32985 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.

APPLICATIONS

NFATc4 (L-9) is recommended for detection of NFATc4 SP-2 domain of mouse 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).

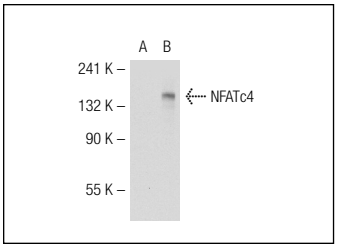
Suitable for use as control antibody for NFATc4 siRNA (h): sc-38115, NFATc4 siRNA (m): sc-38116, NFATc4 shRNA Plasmid (h): sc-38115-SH, NFATc4 shRNA Plasmid (m): sc-38116-SH, NFATc4 shRNA (h) Lentiviral Particles: sc-38115-V and NFATc4 shRNA (m) Lentiviral Particles: sc-38116-V.

Molecular Weight of dephosphorylated NFATc4: 140 kDa.

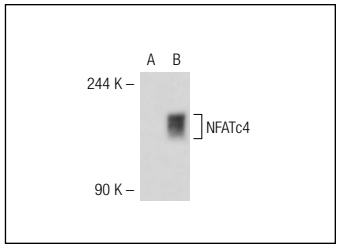
Molecular Weight of hyperphosphorylated NFATc4: 160 kDa.

Positive Controls: NFATc4 (h): 293T Lysate: sc-116481, NFATc4 (m): 293T Lysate: sc-122039 or Ramos cell lysate: sc-2216.

DATA



NFATc4 (L-9): sc-32985. Western blot analysis of NFATc4 expression in non-transfected: sc-117752 (**A**) and human NFATc4 transfected: sc-116481 (**B**) 293T whole cell lysates.



NFATc4 (L-9): sc-32985. Western blot analysis of NFATc4 expression in non-transfected: sc-117752 (**A**) and mouse NFATc4 transfected: sc-122039 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.