

NFATc4 (h): 293T Lysate: sc-116481

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.
7. Yang, T.T., et al. 2005. Recruitment of the extracellular signal-regulated kinase/ribosomal S6 kinase signaling pathway to the NFATc4 transcription activation complex. *Mol. Cell. Biol.* 25: 907-920.
8. Oka, T., et al. 2005. Regulation of calcineurin through transcriptional induction of the calcineurin Ab promoter *in vitro* and *in vivo*. *Mol. Cell. Biol.* 25: 6649-6659.

CHROMOSOMAL LOCATION

Genetic locus: NFATC4 (human) mapping to 14q12.

PRODUCT

NFATc4 (h): 293T Lysate represents a lysate of human NFATc4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

NFATc4 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive NFATc4 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

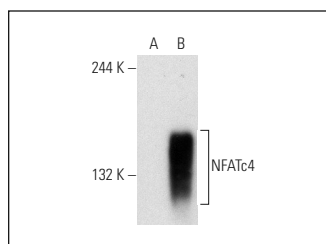
NFATc4 (B-2): sc-271597 is recommended as a positive control antibody for Western Blot analysis of enhanced human NFATc4 expression in NFATc4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

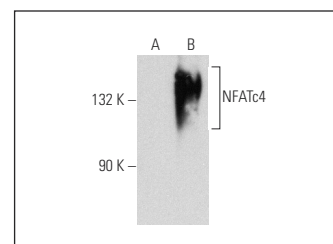
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



NFATc4 (B-2): sc-271597. Western blot analysis of NFATc4 expression in non-transfected: sc-117752 (A) and human NFATc4 transfected: sc-116481 (B) 293T whole cell lysates.



NFATc4 (F-3): sc-271091. Western blot analysis of NFATc4 expression in non-transfected: sc-117752 (A) and human NFATc4 transfected: sc-116481 (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 for detailed protocols and support products.