

NFATc4 (A-2): sc-271127

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.

CHROMOSOMAL LOCATION

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

SOURCE

NFATc4 (A-2) is a mouse monoclonal antibody raised against amino acids 125-198 of NFATc4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain 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-271127 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

NFATc4 (A-2) is recommended for detection of NFATc4 of human origin by Western Blotting (starting dilution 1:100, 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) 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 shRNA Plasmid (h): sc-38115-SH and NFATc4 shRNA (h) Lentiviral Particles: sc-38115-V.

NFATc4 (A-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of dephosphorylated NFATc4: 140 kDa.

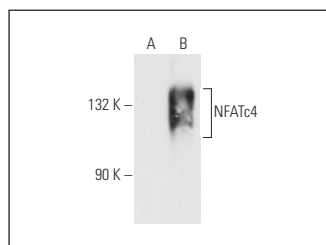
Molecular Weight of hyperphosphorylated NFATc4: 160 kDa.

Positive Controls: NFATc4 (h): 293T Lysate: sc-116481 or HeLa whole cell lysate: sc-2200.

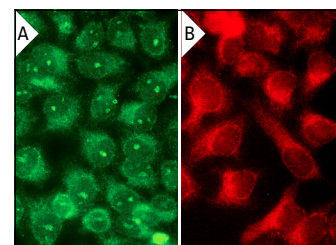
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NFATc4 (A-2): sc-271127. Western blot analysis of NFATc4 expression in non-transfected: sc-117752 (A) and human NFATc4 transfected: sc-116481 (B) 293T whole cell lysates.



NFATc4 (A-2): sc-271127. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A,B).

SELECT PRODUCT CITATIONS

1. Seo, H.H., et al. 2016. The role of nuclear factor of activated T cells during phorbol myristate acetate-induced cardiac differentiation of mesenchymal stem cells. *Stem Cell Res. Ther.* 7: 90.
2. Kotla, S., et al. 2017. Heterodimers of the transcriptional factors NFATc3 and FosB mediate tissue factor expression for 15S-hydroxyeicosatetraenoic acid-induced monocyte trafficking. *J. Biol. Chem.* 292: 14885-14901.
3. Shin, N., et al. 2021. Pimecrolimus interferes the therapeutic efficacy of human mesenchymal stem cells in atopic dermatitis by regulating NFAT-COX2 signaling. *Stem Cell Res. Ther.* 12: 482.

STORAGE

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

PROTOCOLS

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



See **NFATc4 (B-2): sc-271597** for NFATc4 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.