

NFATc3 (M-75): sc-8321

BACKGROUND

Members of the NFAT (nuclear factor of activated T cells) family of transcription factors are related to NFκB/Rel proteins and form cooperative complexes with the AP-1 proteins, Fos and Jun, on DNA to regulate cytokine expression in T cells. NFAT proteins are widely expressed and alternatively modified to generate splice variants, and they are localized to both the cytosol (NFATc) and to the nucleus (NFATn). NFATc1 (NFATc), NFATc2 (NFATp) and NFATc3 (NFAT4, NFSTx) are predominantly expressed in immune cells. NFAT proteins are activated by increases in intracellular calcium, which leads to the calmodulin-dependent phosphatase, calcineurin, dephosphorylating NFAT proteins. This activating event induces a conformational change in the protein structure that exposes the nuclear localization signal and facilitates the translocation of NFAT proteins from the cytosol into the nucleus.

CHROMOSOMAL LOCATION

Genetic locus: NFATC3 (human) mapping to 16q22.1; Nfatc3 (mouse) mapping to 8 D3.

SOURCE

NFATc3 (M-75) is a rabbit polyclonal antibody raised against amino acids 321-395 of NFATc3 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8321 X, 200 µg/0.1 ml.

APPLICATIONS

NFATc3 (M-75) is recommended for detection of NFATc3 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).

NFATc3 (M-75) is also recommended for detection of NFATc3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for NFATc3 siRNA (h): sc-29413, NFATc3 siRNA (m): sc-36057, NFATc3 shRNA Plasmid (h): sc-29413-SH, NFATc3 shRNA Plasmid (m): sc-36057-SH, NFATc3 shRNA (h) Lentiviral Particles: sc-29413-V and NFATc3 shRNA (m) Lentiviral Particles: sc-36057-V.

NFATc3 (M-75) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of dephosphorylated NFATc3: 130 kDa.

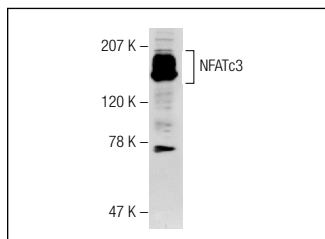
Molecular Weight of phosphorylated NFATc3: 190 kDa.

Positive Controls: Ramos cell lysate: sc-2216, THP-1 cell lysate: sc-2238 or Jurkat whole cell lysate: sc-2204.

STORAGE

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

DATA



NFATc3 (M-75): sc-8321. Western blot analysis of NFATc3 isoform expression in Ramos whole cell lysate.



NFATc3 (M-75): sc-8321. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Stevenson, A.S., et al. 2001. NFAT movement in native smooth muscle. *J. Biol. Chem.* 276: 15018-15024.
- Chadalapaka, G., et al. 2010. Drugs that target specificity proteins down-regulate epidermal growth factor receptor in bladder cancer cells. *Mol. Cancer Res.* 8: 739-750.
- Dai, S., et al. 2010. Chronic AMD3100 antagonism of SDF-1α-CXCR4 exacerbates cardiac dysfunction and remodeling after myocardial infarction. *J. Mol. Cell. Cardiol.* 49: 587-597.
- 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.
- Li, Q., et al. 2010. NFATc4 is negatively regulated in miR-133a-mediated cardiomyocyte hypertrophic repression. *Am. J. Physiol. Heart Circ. Physiol.* 298: H1340-H1347.
- Somvanshi, R.K., et al. 2011. Receptor specific crosstalk and modulation of signaling upon heterodimerization between β1-adrenergic receptor and somatostatin receptor-5. *Cell. Signal.* 23: 794-811.
- Sobrado, M., et al. 2012. Regulator of calcineurin 1 (Rcan1) has a protective role in brain ischemia/reperfusion injury. *J. Neuroinflammation* 9: 48.

RESEARCH USE

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



Try **NFATc3 (F-1): sc-8405**, our highly recommended monoclonal alternative to NFATc3 (M-75). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **NFATc3 (F-1): sc-8405**.