

NFATc2 (1): sc-136206

BACKGROUND

The NFAT (nuclear factor of activated T cells) family of transcription factors regulates cytokine expression in T cells. Members of the family include NFATc1 (NFATc), NFATc2 (NFATp), NFATn, NFATc3 (NFAT4, NFATx) and NFATc4 (NFAT3). Recognition of antigen by the T cell receptor (TCR) eventually activates the calcium-dependent protein phosphatase calcineurin. Once activated, calcineurin stimulates the translocation of NFATc1 (cytoplasmic) from the NFATc1, NFATc2 resides in the cytoplasm and translocates to the nucleus subsequent to activation of calcineurin. Once in the nucleus, NFATc2 synergizes with AP-1 transcription factors to initiate transcription of cytokine genes. NFATc3 and NFATc4 share 65% sequence identity with other members of the NFAT family. They are similar to NFATc2 in that they also synergize with the AP-1 family of proteins.

REFERENCES

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- Flanagan, W.M., et al. 1991. Nuclear association of a T cell transcription factor blocked by FK-506 and Cyclosporin A. *Nature* 352: 803-807.
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- Jain, J., et al. 1993. The T cell transcription factor NFATp is a substrate for calcineurin and interacts with Fos and Jun. *Nature* 365: 352-355.
- Northrop, J.P., et al. 1994. NFAT components define a family of transcription factors targeted in T cell activation. *Nature* 369: 497-502.
- Ho, S.N., et al. 1995. NFATc3, a lymphoid-specific NFATc family member that is calcium-regulated and exhibits distinct DNA binding specificity. *J. Biol. Chem.* 270: 19898-19907.
- Hoey, T., et al. 1995. Isolation of two new members of the NFAT gene family and functional characterization of the NFAT proteins. *Immunity* 2: 461-472.
- Masuda, E.S., et al. 1995. NFATx, a novel member of the nuclear factor of activated T cells family that is expressed predominantly in the thymus. *Mol. Cell. Biol.* 15: 2697-2706.

CHROMOSOMAL LOCATION

Genetic locus: NFATC2 (human) mapping to 20q13.2.

SOURCE

NFATc2 (1) is a mouse monoclonal antibody raised against amino acids 29-181 of NFATc2 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

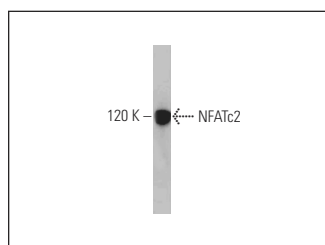
NFATc2 (1) is recommended for detection of NFATc2 of human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NFATc2 siRNA (h): sc-36055, NFATc2 shRNA Plasmid (h): sc-36055-SH and NFATc2 shRNA (h) Lentiviral Particles: sc-36055-V.

Molecular Weight of NFATc2: 135 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or Ramos cell lysate: sc-2216.

DATA



NFATc2 (1): sc-136206. Western blot analysis of NFATc2 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

- Sharma, A.L., et al. 2022. Cocaine sensitizes the CD4⁺ T cells for HIV infection by co-stimulating NFAT and AP-1. *iScience* 25: 105651.

RESEARCH USE

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

PROTOCOLS

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



See **NFATc2 (4G6-G5): sc-7296** for NFATc2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.