

NFATc2 (G-20): sc-23815

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

- Emmel, E.A., et al. 1989. Cyclosporin A specifically inhibits function of nuclear proteins involved in T cell activation. *Science* 246: 1617-1620.
- 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.
- Liu, J., et al. 1991. Calcineurin is a common target of cyclophilin-cyclosporin A and FKBP-FK506 complexes. *Cell* 66: 807-815.
- 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: NFATC2 (human) mapping to 20q13.2; Nfatc2 (mouse) mapping to 2 H3.

SOURCE

NFATc2 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NFATc2 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-23815 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-23815 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

NFATc2 (G-20) is recommended for detection of NFATc2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

NFATc2 (G-20) is also recommended for detection of NFATc2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NFATc2 siRNA (h): sc-36055, NFATc2 siRNA (m): sc-36056, NFATc2 shRNA Plasmid (h): sc-36055-SH, NFATc2 shRNA Plasmid (m): sc-36056-SH, NFATc2 shRNA (h) Lentiviral Particles: sc-36055-V and NFATc2 shRNA (m) Lentiviral Particles: sc-36056-V.

NFATc2 (G-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NFATc2: 135 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Weigmann, B., et al. 2008. The transcription factor NFATc2 controls IL-6-dependent T cell activation in experimental colitis. *J. Exp. Med.* 205: 2099-2110.
- Zetterqvist, A.V., et al. 2015. Nuclear factor of activated T cells is activated in the endothelium of retinal microvessels in diabetic mice. *J. Diabetes Res.* 2015: 428473.

RESEARCH USE

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


 MONOS
 Satisfaction
 Guaranteed

Try **NFATc2 (4G6-G5): sc-7296** or **NFATc2 (A-2): sc-514929**, our highly recommended monoclonal alternatives to NFATc2 (G-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **NFATc2 (4G6-G5): sc-7296**.