SANTA CRUZ BIOTECHNOLOGY, INC.

NFATc2 (M-20): sc-1151

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Emmel, E.A., et al. 1989. Cyclosporin A specifically inhibits function of nuclear proteins involved in T cell activation. Science 246: 1617-1620.
2. 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.
3. 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 (mouse) mapping to 2 H3.

SOURCE

NFATc2 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of NFATc2 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.

Blocking peptide available for competition studies, sc-1151 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-1151 X, 200 µg/0.1 ml.

APPLICATIONS

NFATc2 (M-20) is recommended for detection of NFATc2 of mouse and rat 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).

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

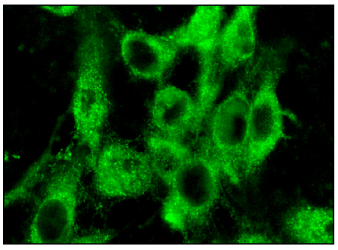
NFATc2 (M-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NFATc2: 135 kDa.

STORAGE

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

DATA



NFATc2 (M-20): sc-1151. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Aoki, Y., et al. 1998. CsA-sensitive purine-box transcriptional regulator in bronchial epithelial cells contains NF45, NF90, and Ku. Am. J. Physiol. Lung Cell. Mol. Physiol. 275: L1164-L1172.
2. Li-Weber, M., et al. 2000. T cell activation-induced and HIV Tat-enhanced CD95(APO-1/FAS) ligand transcription involves NFκB. Eur. J. Immunol. 30: 661-670.
3. Zhu, C., et al. 2003. Activation of the murine interleukin-12 p40 promoter by functional interactions between NFAT and ICSBP. J. Biol. Chem. 278: 39372-39382.
4. Asai, M., et al. 2004. Nuclear factor of activated T cells (NFAT) is involved in the depolarization-induced activation of growth hormone-releasing hormone gene transcription *in vitro*. Mol. Endocrinol. 18: 3011-3019.
5. Methi, T., et al. 2005. Short-interfering RNA-mediated Lck knockdown results in augmented downstream T cell responses. J. Immunol. 175: 7398-7406.
6. Luhm, J., et al. 2006. β-(1→3)-D-glucan modulates DNA binding of nuclear factors κB, AT and IL-6 leading to an anti-inflammatory shift of the IL-1β/IL-1 receptor antagonist ratio. BMC Immunol. 7: 5.
7. Shi, L., et al. 2007. Dynamic binding of Ku80, Ku70 and NF90 to the IL-2 promoter *in vivo* in activated T cells. Nucleic Acids Res. 35: 2302-2310.

RESEARCH USE

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