SANTA CRUZ BIOTECHNOLOGY, INC.

NFATc2 (A-2): sc-514929

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.

CHROMOSOMAL LOCATION

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

SOURCE

NFATc2 (A-2) is a mouse monoclonal antibody raised against amino acids 191-410 mapping within an internal region of NFATc2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-514929 X, 200 µg/0.1 ml.

NFATc2 (A-2) is available conjugated to agarose (sc-514929 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514929 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514929 PE), fluorescein (sc-514929 FITC), Alexa Fluor® 488 (sc-514929 AF488), Alexa Fluor® 546 (sc-514929 AF546), Alexa Fluor® 594 (sc-514929 AF594) or Alexa Fluor® 647 (sc-514929 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514929 AF680) or Alexa Fluor® 790 (sc-514929 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NFATc2 (A-2) is recommended for detection of NFATc2 of mouse, rat and 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 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 (A-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

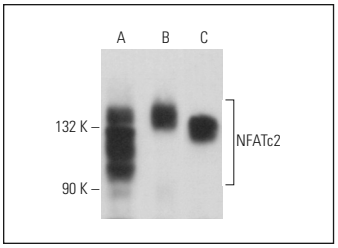
Molecular Weight of NFATc2: 135 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, Jurkat + IL-2 cell lysate: sc-2278 or Ramos cell lysate: sc-2216.

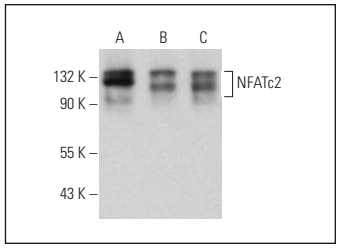
RECOMMENDED SUPPORT REAGENTS

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



NFATc2 (A-2): sc-514929. Western blot analysis of NFATc2 expression in HL-60 (**A**), RAW 264.7 (**B**) and Rat2 (**C**) whole cell lysates.



NFATc2 (A-2): sc-514929. Western blot analysis of NFATc2 expression in Ramos (**A**), Jurkat + IL-2 (**B**), and MOLT-4 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Choi, S.Y., et al. 2019. Crlz-1 controls germinal center reaction by relaying a Wnt signal to the Bcl-6 expression in centroblasts during humoral immune responses. J. Immunol. 203: 2630-2643.
2. Hu, J., et al. 2021. Angiotensin II receptor blockade alleviates calcineurin inhibitor nephrotoxicity by restoring cyclooxygenase 2 expression in kidney cortex. Acta Physiol. 232: e13612.
3. Hu, S., et al. 2022. The environmental pollutant 3-methyl-4-nitrophenol reduces the regulatory T cells in the intestine. Toxicology 482: 153356.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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