

TACI (N-19): sc-7333

BACKGROUND

The NFAT (nuclear factor of activated T cells) family of transcription factors regulates cytokine expression in T cells through *cis*-acting elements located in the promoters of the cytokine genes. The NFAT family consists of the cytoplasmic NFAT (NFATc), transcription factors NFATc1, NFATc2, NFATc3 and NFATc4, and nuclear NFAT (NFATn). Each of these transcription factors plays a role in T cell activation. CAML (calcium-signal modulating cyclophilin ligand) has been identified as an activator of NFAT and NF-IL2A when overexpressed in Jurkat cells. CAML has also been shown to activate calcineurin by causing calcium influx. TACI (transmembrane activator and CAML-interactor), a member of the TNF receptor superfamily, was identified based on its capacity to bind to CAML, and has been shown to induce activation of NFAT in the presence of CAML.

REFERENCES

1. Ho, S., Timmerman, L., Northrop, J. and Crabtree, G.R. 1994. Cloning and characterization of NFATc and NFATp: the cytoplasmic components of NFAT. *Adv. Exp. Med. Biol.* 365: 167-173.
2. Bram, R.J. and Crabtree, G.R. 1994. Calcium signalling in T cells stimulated by a cyclophilin B-binding protein. *Nature* 371: 355-358.
3. Hoey, T., Sun, Y.L., Williamson, K. and Xu, X. 1995. Isolation of two new members of the NFAT gene family and functional characterization of the NFAT proteins. *Immunity* 2: 461-472.
4. Ho, S.N., Thomas, D.J., Timmerman, L.A., Li, X., Francke, U. and Crabtree, G.R. 1995. NFATc3, a lymphoid-specific NFATc family member that is calcium-regulated and exhibits distinct DNA binding specificity. *J. Biol. Chem.* 270: 19898-19907.
5. Rao, A. 1995. NFATp, a cyclosporin-sensitive transcription factor implicated in cytokine gene induction. *J. Leukoc. Biol.* 57: 536-542.
6. Masuda, E.S., Naito, Y., Tokumitsu, H., Campbell, D., Saito, F., Hannum, C., Arai, K. and Arai, N. 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.
7. Timmerman, L.A., Clipstone, N.A., Ho, S.N., Northrop, J.P. and Crabtree, G.R. 1996. Rapid shuttling of NFAT in discrimination of Ca²⁺ signals and immunosuppression. *Nature* 383: 837-840.
8. von Bulow, G.U. and Bram, R.J. 1997. NFAT activation induced by a CAML-interacting member of the tumor necrosis factor receptor superfamily. *Science* 278: 138-141.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF13B (human) mapping to 17p11.2.

SOURCE

TACI (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TACI of human origin.

RESEARCH USE

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

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-7333 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TACI (N-19) is recommended for detection of TACI (transmembrane activator and CAML interactor) of 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).

Suitable for use as control antibody for TACI siRNA (h): sc-40243, TACI shRNA Plasmid (h): sc-40243-SH and TACI shRNA (h) Lentiviral Particles: sc-40243-V.

Molecular Weight of TACI (N-19): 45 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

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

1. He, B., et al. 2010. The transmembrane activator TACI triggers immunoglobulin class switching by activating B cells through the adaptor MyD88. *Nat. Immunol.* 11: 836-845.

STORAGE

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

PROTOCOLS

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



Try **TACI (C-9): sc-365253** or **TACI (1A1): sc-32775**, our highly recommended monoclonal alternatives to TACI (N-19).