

TACI (1A1): sc-32775

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

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3. 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.
4. Rao, A. 1995. NFATp, a cyclosporin-sensitive transcription factor implicated in cytokine gene induction. *J. Leukoc. Biol.* 57: 536-542.
5. 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.
6. 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.
7. Timmerman, L.A., et al. 1996. Rapid shuttling of NFAT in discrimination of Ca^{2+} 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.
9. Gross, J.A., et al. 2000. TACI and BCMA are receptors for a TNF homologue implicated in B-cell autoimmune disease. *Nature* 404: 995-999.

CHROMOSOMAL LOCATION

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

SOURCE

TACI (1A1) is a rat monoclonal antibody raised against rat basophilic leukemia mast cells transfected with TACI of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for neutralizing, sc-32775 L, 200 µg/0.1 ml.

TACI (1A1) is available conjugated to either phycoerythrin (sc-32775 PE) or fluorescein (sc-32775 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

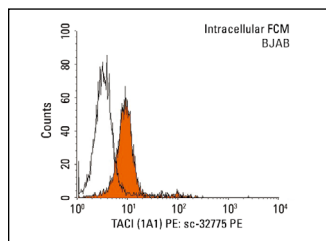
APPLICATIONS

TACI (1A1) is recommended for detection of TACI of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

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: 45 kDa.

DATA



TACI (1A1) PE: sc-32775 PE. Intracellular FCM analysis of fixed and permeabilized BJAB cells. Black line histogram represents the isotype control, normal rat IgG_{2a}-PE: sc-2872.

SELECT PRODUCT CITATIONS

1. Saito, Y., et al. 2008. B-cell-activating factor inhibits CD20-mediated and B-cell receptor-mediated apoptosis in human B cells. *Immunology* 125: 570-590.

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.