

# TALL-1 (B-6): sc-271198

## BACKGROUND

TNF cytokine family member TALL-1 (also designated BAFF, THANK and BLYS), is a type II membrane protein that shares characteristics with other members of the tumor necrosis factor (TNF) cytokine family. TALL-1 is expressed abundantly in peripheral blood leukocytes, monocytes and macrophages. TALL-1 is critically involved in the regulation of infections, inflammation, autoimmune diseases and tissue homeostasis. TALL-1 is a potent B cell stimulatory factor which is functionally involved in B cell proliferation and may be a primary mediator in B cell-associated autoimmune diseases. The C-terminal extracellular domain has  $\beta$  jelly roll topography and is important in ligand trimerization. The binding of the ligand to its respective receptor induces oligomerization, initiating downstream signaling events. Intrinsic to oligomerization is the formation of the receptor binding site at the junction between neighboring subunits, creating a multivalent ligand.

## REFERENCES

1. Smith, C.A., et al. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation and death. *Cell* 76: 959-962.
2. Hahne, M., et al. 1998. APRIL, a new ligand of the tumor necrosis factor family, stimulates tumor cell growth. *J. Exp. Med.* 188: 1185-1190.
3. Schneider, P., et al. 1999. BAFF, a novel ligand of the tumor necrosis factor family, stimulates B cell growth. *J. Exp. Med.* 189: 1747-1756.
4. Moore, P.A., et al. 1999. BLYS: member of the tumor necrosis factor family and B lymphocyte stimulator. *Science* 285: 260-263.
5. Mukhopadhyay, A., et al. 1999. Identification and characterization of a novel cytokine, THANK, a TNF homologue that activates apoptosis, nuclear factor- $\kappa$ B, and c-Jun NH<sub>2</sub>-terminal kinase. *J. Biol. Chem.* 274: 15978-15981.
6. Shu, H.B., et al. 1999. TALL-1 is a novel member of the TNF family that is downregulated by mitogens. *J. Leukoc. Biol.* 65: 680-683.
7. Khare, S.D., et al. 2000. Severe B cell hyperplasia and autoimmune disease in TALL-1 transgenic mice. *Proc. Natl. Acad. Sci. USA* 97: 3370-3375.
8. Mariette, X., et al. 2003. The level of BLYS (BAFF) correlates with the titre of autoantibodies in human Sjögren's syndrome. *Ann. Rheum. Dis.* 62: 168-171.

## CHROMOSOMAL LOCATION

Genetic locus: TNFSF13B (human) mapping to 13q33.3.

## SOURCE

TALL-1 (B-6) is a mouse monoclonal antibody raised against amino acids 1-230 of TALL-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

TALL-1 (B-6) is recommended for detection of TALL-1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 TALL-1 siRNA (h): sc-39830, TALL-1 shRNA Plasmid (h): sc-39830-SH and TALL-1 shRNA (h) Lentiviral Particles: sc-39830-V.

Molecular Weight (predicted) of TALL-1: 31 kDa.

Molecular Weight (observed) of unglycosylated TALL-1: 35 kDa.

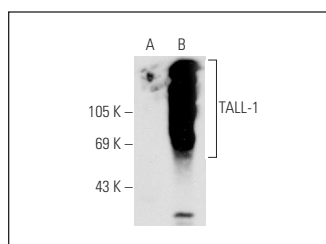
Molecular Weight (observed) of glycosylated TALL-1: 90-132 kDa.

Positive Controls: human tonsil tissue extract: sc-364263, TALL-1 (h): 293T Lysate: sc-176656 or SK-N-SH cell lysate: sc-2410.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



TALL-1 (B-6): sc-271198. Western blot analysis of TALL-1 expression in non-transfected: sc-117752 (A) and human TALL-1 transfected: sc-176656 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.