

# TREML1 (G-16): sc-169667

## BACKGROUND

TREML1 (triggering receptor expressed on myeloid cells-like 1), also known as TLT1 or TLT-1, is a 311 amino acid single-pass type I membrane protein. Expressed in platelets, monocytic leukemia and T-cell leukemia, TREML1 is a cell surface receptor that may be involved in the innate and adaptive immune response. TREML1 may play a significant role in maintaining vascular hemostasis, coagulation, and inflammation at sites of injury through its location in platelets. It is suggested that defects in the gene encoding TREML1 may be the cause of the Gray platelet syndrome, a rare inherited congenital bleeding disorder caused by a reduction or absence of the platelet  $\alpha$ -granules in blood platelets. TREML1 enhances calcium signaling when bound to SH-PTP2 and contains one Ig-like V-type domain.

## REFERENCES

1. Washington, A.V., et al. 2002. Initial characterization of TREM-like transcript (TLT)-1: a putative inhibitory receptor within the TREM cluster. *Blood* 100: 3822-3824.
2. Washington, A.V., et al. 2004. A TREM family member, TLT-1, is found exclusively in the  $\alpha$ -granules of megakaryocytes and platelets. *Blood* 104: 1042-1047.
3. Gibot, S. 2005. Clinical review: role of triggering receptor expressed on myeloid cells-1 during sepsis. *Crit. Care* 9: 485-489.
4. Murakami, Y., et al. 2006. Induction of triggering receptor expressed on myeloid cells 1 in murine resident peritoneal macrophages by monosodium urate monohydrate crystals. *Arthritis Rheum.* 54: 455-462.
5. Lu, Y.T., et al. 2006. Preparation and characterization of monoclonal antibody against protein TREM-like transcript-1 (TLT-1). *Hybridoma* 25: 20-26.
6. Gattis, J.L., et al. 2006. The structure of the extracellular domain of triggering receptor expressed on myeloid cells like transcript-1 and evidence for a naturally occurring soluble fragment. *J. Biol. Chem.* 281: 13396-13403.
7. Giomarelli, B., et al. 2007. Inhibition of Thrombin-induced platelet aggregation using human single-chain Fv antibodies specific for TREM-like transcript-1. *Thromb. Haemost.* 97: 955-963.

## CHROMOSOMAL LOCATION

Genetic locus: TREML1 (human) mapping to 6p21.1; Trem1 (mouse) mapping to 17 C.

## SOURCE

TREML1 (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TREML1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-169667 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TREML1 (G-16) is recommended for detection of TREML1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other TREML family members.

TREML1 (G-16) is also recommended for detection of TREML1 in additional species, including equine and porcine.

Suitable for use as control antibody for TREML1 siRNA (h): sc-95479, TREML1 siRNA (m): sc-154629, TREML1 shRNA Plasmid (h): sc-95479-SH, TREML1 shRNA Plasmid (m): sc-154629-SH, TREML1 shRNA (h) Lentiviral Particles: sc-95479-V and TREML1 shRNA (m) Lentiviral Particles: sc-154629-V.

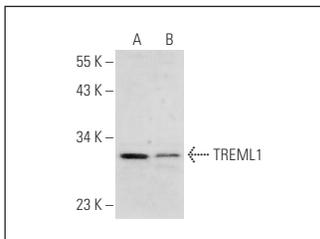
Molecular Weight of TREML1: 35 kDa.

Positive Controls: mouse spleen extract: sc-2391 or mouse placenta extract: sc-364247.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



TREML1 (G-16): sc-169667. Western blot analysis of TREML1 expression in mouse spleen (A) and mouse placenta (B) tissue extracts.

## 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.