

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse TREML1/TLT-1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 10% cross-reactivity with recombinant human TREML1 is observed.                                                                                            |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse TREML1/TLT-1<br>Gly18-Cys178<br>Accession # NP_082039                                                                                                                                                                 |
| <b>Conjugate</b>          | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## BACKGROUND

Triggering receptor expressed on myeloid cells-like protein 1 (TREML1)/TREM-like transcript-1 (TLT-1) is a 40 kDa type I transmembrane receptor and member of the TREM family of proteins (1). Mouse TREML1/TLT-1 is synthesized as a 317 amino acid (aa) precursor that contains a 20 aa signal sequence, a 155 aa extracellular domain (ECD), a 21 aa transmembrane region, and a 121 aa cytoplasmic domain (SwissProt #: Q8K558). The ECD contains an Ig-like V-type domain (aa 21-122), and the cytoplasmic region contains a proline-rich region (aa 245-275) and an immunoreceptor tyrosine-based inhibition motif (ITIM) characterized by the residues S/I/I/V/LXYXXV/L (1). A splicing variant produces a second isoform that has a six aa substitution for aa 173 in isoform 1. Mature mouse TREML1/TLT-1 shares 65% aa sequence identity with mature human TREML1/TLT-1. TREML1/TLT-1 is expressed exclusively in megakaryocytes and platelets where it colocalizes with CD62P in α-granules in resting platelets and on the cell surface of platelets activated by thrombin (1-3). The receptor's expression is up-regulated dramatically upon platelet activation (2). Antibodies to single-chain Fv fragments specific for TLT-1 inhibited thrombin-mediated human platelet aggregation suggesting its role in the regulation of aggregation (5). In addition, soluble fragments including the ECD can be released into serum by proteolysis (3). The phosphorylated TREML1/TLT-1 is able to interact with both SHP-1 and SHP-2 through ITIM (1, 4). SHP-2 interaction enhances FcεRI-mediated calcium signaling in rat basophilic leukemia cells (1). It is hypothesized that TREML1/TLT-1 plays a role in the innate and adaptive immune responses.

## PRODUCT SPECIFIC NOTICES

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