Human TREM-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1278

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TREM-1 in ELISAs and Western blots. In ELISAs, less than 0.2% cross-reactivity with recombinant mouse (rm) TREM-1 and rmTREM-2b is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human TREM-1 Met1-Arg200 Accession # Q9NP99
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

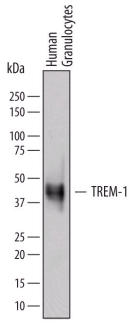
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Flow Cytometry	2.5 µg/10^6 cells	Human whole blood monocytes and neutrophils
Human TREM-1 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Human TREM-1 Antibody (Catalog # AF1278)
ELISA Detection	0.1-0.4 µg/mL	Human TREM-1 Biotinylated Antibody (Catalog # BAF1278)
Standard		Recombinant Human TREM-1 Fc Chimera (Catalog # 1278-TR)
Agonist Activity	Measured by its ability to stimulate TNF-α secretion by human peripheral blood mononuclear cells. Bouchon, A. *et al.* (2001) Nature **410**:1103 and Bouchon, A. *et al.* (2000) J. Immunology **164**:4991. The ED_{50} for this effect is typically 2 - 6 µg/mL.	

DATA

Western Blot



Detection of Human TREM-1 by Western Blot. Western blot shows lysates of human granulocytes. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human TREM-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1278) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for TREM-1 at approximately 40 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

TREM-1 (Triggering Receptor Expressed on Myeloid cells) is a type I transmembrane protein having a single Ig-like domain. It associates with the adapter protein, DAP12, to deliver an activating signal. Several other TREM family members have been reported that are structurally similar but share less than 30% amino acid identity. TREM-1 is expressed on blood neutrophils and a subset of monocytes, and expression is up-regulated by bacterial LPS. The natural ligand for TREM-1 has not been identified. However, engagement of TREM-1 with an agonist monoclonal antibody leads to expression of IL-8, MCP-1, and TNF-α, suggesting that this receptor plays an important role in inflammatory responses. TREM-1 is expressed at high levels on neutrophils of patients with microbial sepsis and in mice with LPS-induced shock. Blockade of TREM-1 with a TREM-1/Fc fusion protein protected mice against LPS-induced shock. Human and mouse TREM-1 share approximately 42% amino acid sequence homology (1-3).

References:

1. Bouchon, A. (2000) J. Immunol. **164**:4991.
2. Bouchon, A. (2001) Nature **410**:1103.
3. Nathan, C. and A. Ding (2001) Nature Med. **7**:530.