

# TREM-1 (2E2): sc-293450

## BACKGROUND

TREM-1 (triggering receptor expressed on myeloid cells-1) is expressed in monocytes and neutrophils but not in lymphocytes, dendritic cells, or other cell types. TREM-1 is a glycoprotein that is reduced by deglycosylation, in agreement with the predicted molecular mass. TREM-1 is an activating receptor of the Ig superfamily that is expressed on human myeloid cells, selectively expressed on blood neutrophils and a subset of monocytes, and is upregulated by bacterial LPS. Immunoblot analysis shows that TREM-1 is associated with DAP12, a molecule frequently associated with activating receptors. TREM-1 and the myeloid DAP12-associating lectin (MDL-1) are recently identified receptors which associate non-covalently with DAP12 to form receptor complexes that are involved in monocytic activation and inflammatory response.

## REFERENCES

1. Bouchon, A., et al. 2000. Cutting edge: inflammatory responses can be triggered by TREM-1, a novel receptor expressed on neutrophils and monocytes. *J. Immunol.* 164: 4991-4995.
2. Bouchon, A., et al. 2001. TREM-1 amplifies inflammation and is a crucial mediator of septic shock. *Nature* 410: 1103-1107.
3. Gingras, M.C., et al. 2002. TREM-1, MDL-1, and DAP12 expression is associated with a mature stage of myeloid development. *Mol. Immunol.* 38: 817-824.
4. Chung, D.H., et al. 2002. Characterization of TREM-3, an activating receptor on mouse macrophages: definition of a family of single Ig domain receptors on mouse chromosome 17. *Eur. J. Immunol.* 32: 59-66.
5. Murakami, Y., et al. 2007. Lipopolysaccharide-induced upregulation of triggering receptor expressed on myeloid cells-1 expression on macrophages is regulated by endogenous prostaglandin E2. *J. Immunol.* 178: 1144-1150.
6. Gibot, S., et al. 2007. TREM-1 promotes survival during septic shock in mice. *Eur. J. Immunol.* 37: 456-466.
7. Zeng, H., et al. 2007. TREM-1 expression in macrophages is regulated at transcriptional level by NF $\kappa$ B and PU.1. *Eur. J. Immunol.* 37: 2300-2308.

## CHROMOSOMAL LOCATION

Genetic locus: TREM1 (human) mapping to 6p21.1.

## SOURCE

TREM-1 (2E2) is a mouse monoclonal antibody raised against a recombinant protein mapping within amino acids 21-234, representing full length TREM-1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> 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

TREM-1 (2E2) is recommended for detection of TREM-1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TREM-1 siRNA (h): sc-42999, TREM-1 shRNA Plasmid (h): sc-42999-SH and TREM-1 shRNA (h) Lentiviral Particles: sc-42999-V.

Molecular Weight of TREM-1: 30 kDa.

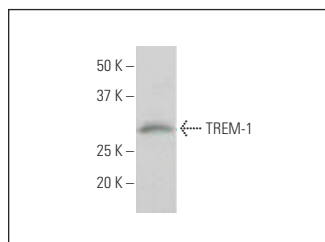
Molecular Weight of N-deglycosylated TREM-1: 26 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

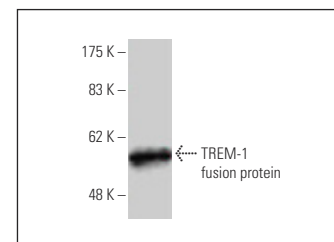
## RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



TREM-1 (2E2): sc-293450. Western blot analysis of TREM-1 expression in HL-60 whole cell lysate.



TREM-1 (2E2): sc-293450. Western blot analysis of human recombinant TREM-1 fusion protein.

## SELECT PRODUCT CITATIONS

1. He, Y., et al. 2019. Inhibition of triggering receptor expressed on myeloid cell-1 alleviates acute gouty inflammation. *Mediators Inflamm.* 2019: 5647074.
2. Lemoine, L., et al. 2020. Microbially competent 3D skin: a test system that reveals insight into host-microbe interactions and their potential toxicological impact. *Arch. Toxicol.* 94: 3487-3502.
3. Liu, M., et al. 2023. Role of triggering receptor expressed on myeloid cells-1 in the mechanotransduction signaling pathways that link low shear stress with inflammation. *Sci. Rep.* 13: 4656.

## RESEARCH USE

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