Active Recombinant Mouse Trem2 protein, His-tagged

Cat. No. Trem2-272R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Trem2(Leu19-Ser171) fused with His tag at C-terminal was expressed in NS0.
Species	Mouse
Source	Mammalian Cells
ProteinLength	19-171 a.a.
Description	TREM-2 (Triggering Receptor Expressed on Myeloid cells-2) is a 35 kDa type I transmembrane member of the TREM family and Ig superfamily. Mature mouse TREM-2 consists of a 153 amino acid (aa) extracellular domain (ECD) with one Ig-like domain, a 21 aa transmembrane segment, and a 35 aa cytoplasmic domain. Within the ECD, mouse TREM-2 shares 73% and 90% aa sequence identity with human and rat TREM-2, respectively. Soluble forms of the TREM-2 ECD are generated by alternative splicing or proteolytic cleavage, and the cytoplasmic domain can be liberated by gamma-Secretase mediated intramembrane cleavage. A positively charged lysine within the transmembrane segment allows association with the signal adapter protein, DAP12 and inhibition of macrophage activation. TREM-2 is expressed on macrophages, immature myeloid dendritic cells, osteoclasts, microglia, and adipocytes. It promotes the differentiation and function of osteoclasts, the production of inflammatory cytokines by adipocytes, insulin resistance, and the phagocytic clearance of bacteria. In the CNS, TREM-2 binds to ApoE, ApoA1, and ApoB and mediates the clearance of apoptotic neurons, amyloid plaques, and cell

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	debris following demyelination. TREM-2 also interacts with and modifies signaling through Plexin A1 on dendritic cells and osteoclasts. Mutations in TREM-2 or DAP12 are associated with the development of Alzheimer's disease and Nasu-Hakola disease (NHD/PLOSL) which is characterized by presenile dementia and bone cysts. Soluble TREM-2 is elevated in cerebrospinal fluid of patients with active multiple sclerosis (MS), and TREM-2 blockade exacerbates disease symptoms in the experimental EAE model of MS.
Predicted N Terminal	Leu19
Form	Lyophilized from a 0.2 μm filtered solution in HEPES and NaCl.
Bio-activity	Measured by its ability to bind fluorescein-conjugated S. aureus Bioparticles. Daws, M.R. et al. (2003) J. Immunol. 171:594. The ED50 for this effect is 20-120 ng/mL using a His tag antibody coated plate.
Molecular Mass	Predicted Molecular Mass: 18 kDa
Endotoxin	<0.1 EU per 1 μg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 μg/mL in water.

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GENE INFORMATION

Gene Name	Trem2 triggering receptor expressed on myeloid cells 2 [Mus musculus]
Official Symbol	Trem2
Synonyms	TREM2; triggering receptor expressed on myeloid cells 2; TREM-2; triggering receptor expressed on monocytes 2; triggering receptor expressed on myeloid cells 2a; triggering receptor expressed on myeloid cells 2b; triggering receptor expressed on myeloid cells 2c; Trem2a; Trem2b; Trem2c;
Gene ID	83433
mRNA Refseq	NM_031254
Protein Refseq	NP_112544
UniProt ID	Q99NH8

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