TREM-2 Protein, Human (HEK293, His)

Cat. No.:	HY-P70534
Synonyms:	Triggering receptor expressed on myeloid cells 2; TREM-2; Triggering receptor expressed on monocytes 2; TREM2
Species:	Human
Source:	HEK293
Accession:	Q9NZC2 (H19-S174)
Gene ID:	54209
Molecular Weight:	22-40 kDa

PROPERTIES

AA Sequence	H N T T V F Q G V A G Q S L Q V S C P Y D S M K H W G R R K A W C R Q L G E K G P C Q R V V S T H N L W L L S F L R R W N G S T A I T D D T L G G T L T I T L R N L Q P H D A G L Y Q C Q S L H G S E A D T L R K V L V E V L A D P L D H R D A G D L W F P G E S E S F E D A H V E H S I S R S L L E G E I P F P P T S
Biological Activity	Immobilized Human TREM-2, at 1 μg/mL (100 μL/well) can bind Anti-TREM2 Antibody. The ED_{50} is 30.5 ng/mL, corresponding to a specific activity is 3.28×10^4 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4 or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Triggering receptor expressed on myeloid cells 2 (TREM-2) can form a receptor signaling complex with TYROBP, mediating signaling and cell activation after ligand binding. TREM-2 is a receptor for amyloid beta protein 42 and mediates its uptake and degradation by microglia. Binding to amyloid-β42 mediates microglia activation, proliferation, migration, apoptosis and the expression of pro-inflammatory cytokines such as IL6R, CCL3 and anti-inflammatory cytokine ARG1. TREM-2 is a receptor for lipoprotein particles (such as LDL, VLDL, and HDL) and apolipoproteins (such as APOA1, APOA2, APOB, APOE,

APOE2, APOE3, APOE4, and CLU) and enhances their uptake in microglia. TREM-2 acts as an upstream regulator of the Wnt/beta-catenin signaling cascade to regulate microglial cell proliferation. TREM-2 acts on the metabolism of microglia by activating MTOR. TREM-2 inhibited the response of PI3K and NF-kappa-B signals to lipopolysaccharide. It can promote phagocytosis, inhibit the production of proinflammatory cytokines and nitric oxide, inhibit cell apoptosis, and increase the expression of IL10 and TGFB. During oxidative stress, it promotes anti-apoptotic NF-kappa-B signaling and ERK signaling. TREM-2 can trigger immune response activation of macrophages and dendritic cells mediating cytokine-induced fusion of macrophages to form multinucleated giant cells, and in dendritic cells mediating upregulation of chemokine receptor CCR7 and maturation and survival of dendritic cells[1][2][3][4][5][6].

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