Human TREM2 Protein (ECD,His Tag)

Catalog Number: 11084-H08H

General Information

Gene Name Synonym:

TREM-2; Trem2a; Trem2b; Trem2c

Protein Construction:

A DNA sequence encoding the extracellular domain of human TREM2 (NP_061838.1) (Met1-Ser174) was expressed fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 90 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Predicted N terminal: His 19

Molecular Mass:

The secreted recombinant human TREM2 comprises 167 amino acids with a predicted molecular mass of 18.9 kDa. As a result of glycosylation, the apparent molecular mass of rhTREM2 is approximately 30-40 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

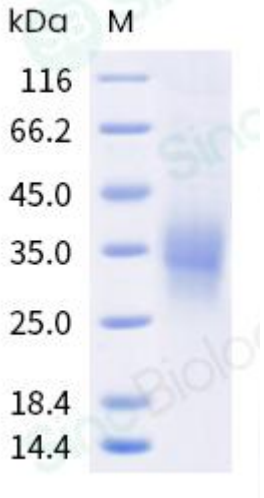
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Triggering receptor expressed on myeloid cells 2 (TREM2) is a single Ig domain receptor. It is expressed on macrophages and dendritic cells but not on granulocytes or monocytes. Its expression is most abundant in the basal ganglia, corpus callosum, medulla oblongata and spinal cord, and microglial cells are the major TREM2-producing cell type in the central nervous system (CNS). TREM2 may play a role in chronic inflammations and may stimulate production of constitutive rather than inflammatory chemokines and cytokines. TREM2 forms a receptor signaling complex with TYROBP and triggers activation of the immune responses in macrophages and dendritic cells. It also associates with the signal adapter protein, DAP12, which has a cytoplasmic ITAM, leading to the subsequent activation of cytoplasmic tyrosine kinases. TREM2 is both required and sufficient for competent uptake of apoptotic neuronal cells. TREM2 and TREM2-L form a receptor-ligand pair connecting microglia with apoptotic neurons, directing removal of damaged cells to allow repair. Deficiency of the adapter protein DAP12 or its associated receptor TREM2 is associated with abnormal osteoclast development in humans. Defects in TREM2 are causes of PLOSL, also known as NHD. In addition, TREM2 signaling is also an important pathway to promote healing of wounds in the colon where stem cell replacement is necessary.

References

1.Bouchon, A. et al., 2000, J. Immunol. 164: 4991-4995.
2.Paloneva, J. et al., 2002, Am. J. Hum. Genet. 71:656-662.
3.Prada, I. et al., 2006, Neuroscience. 140 (4): 1139-48.