Human TREM1 Protein (His & Fc Tag)

Catalog Number: **10511-H03H**

General Information

Gene Name Synonym:

CD354; TREM-1

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Arg 200) of human TREM1 (NP_061113.1) precursor was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

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

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Ala 21

Molecular Mass:

The recombinant human TREM1/Fc is a disulfide-linked homodimer after removal of the signal peptide. The reduced monomer consists of 428 amino acids and has a predicted molecular mass of 48.3 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhTREM1/Fc monomer is approximately 60-65 kDa due to glycosylation.

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

Storage:

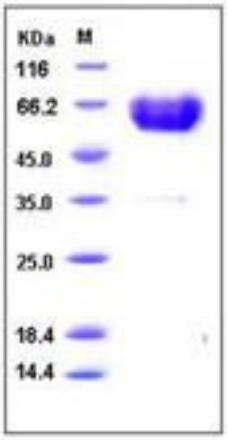
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

TREM1 (triggering receptor expressed on myeloid cells) is a type I transmembrane protein with a single Ig-like domain, and is selectively expressed on blood neutrophils and a subset of monocytes. As a member of the growing family of receptors related to NK cell receptors, TREM1 activates downstream signaling events with the help of an adapter protein called DAP12. Expression of TREM1 is up-regulated by bacterial LPS, a ligand for TLR4, as well as lipoteichoic acid. Although its natural ligand has not been identified, engagement of TREM1 with agonist mAbs triggers secretion of the proinflammatory cytokines TNF-α and IL-1β, as well as chemokines such as IL-8 and monocyte chemoattractant protein (MCP)-1. Intracellularly, TREM1 induces Ca2+ mobilization and tyrosine phosphorylation of extracellular signal-related kinase 1 (ERK1), ERK2 and phospholipase C-γ. In an animal model of LPS-induced septic shock, blockade of TREM1 signaling inhibited hyperresponsiveness and death. Thus, it has been demonstrated that TREM1 performs a critical function in immune responses involved in host defense against microbial challenges, and is suggested to be a potential therapeutic target for septic shock.

References

1.Bouchon, A. et al., 2000, J. Immunol. 164: 4991-4995. 2.Bouchon, A. et al., 2001, Nature. 410: 1103-1107. 3.Bleharski, J.R. et al., 2003, J. Immunol. 170: 3812-3818.