Human TNFR1 / CD120a / TNFRSF1A Protein (His Tag)

Catalog Number: 10872-H08H

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CD120a; FPF; MS5; p55; p55-R; p60; TBP1; TNF-R; TNF-R-I; TNF-R55; TNFAR; TNFR1; TNFR1-d2; TNFR55; TNFR60

Protein Construction:

A DNA sequence encoding the human TNFRI (NP_001056.1) extracellular domain (Met 1-Thr 211) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio Activity:

1. Immobilized human TNFRI-His at 10 μg/mL (100 μl/well) can bind biotinylated human TNFα. The EC_{50} of biotinylated human TNFα is 5-12 μg/mL.
2. Measured by its ability to inhibit TNFα-mediated cytotoxicity in the L929 mouse fibrosarcoma cells in the presence of metabolic inhibitor actinomycin D. The ED_{50} for this effect is typically 0.05-0.4μg/mL in the presence of 0.25 ng/mL recombinant human TNFα.

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: Ile 22

Molecular Mass:

The recombinant human TNFRI consists of 201 amino acids after removal of the signal peptide and has a predicted molecular mass of 22.7 kDa. As a result of glycosylation, the apparent molecular mass of rh TNFRI is 30-35 kDa 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

Storage:

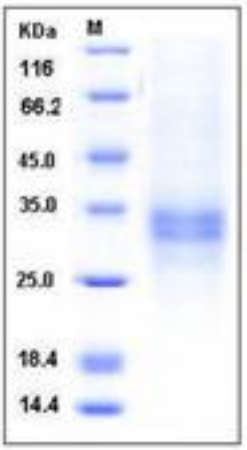
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The cluster of differentiation (CD) system is commonly used as cell markers in immunophynotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. CD120a (cluste of differentiation 120a), also known as TNFR1 / TNFRSF1A, is a member of CD family, tumor necrosis factor receptor superfamily. CD120a is one of the most primary receptors for the tumor necrosis factor-alpha. It has been shown to be localized to both plasma membrane lipid rafts and the trans golgi complex with the help of the death domain (DD). CD120a can activate the transcription factor NF-κB, mediate apoptosis, and regulate inflammation processes.

References

1.Zola H, *et al.* (2007) CD molecules 2006-human cell differentiation molecules. J Immunol Methods. 318 (1-2): 1-5. 2.Ho IC, *et al.* (2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. Nat Rev Immunol. 9 (2): 125-35. 3.Matesanz-Isabel J, *et al.* (2011) New B-cell CD molecules. Immunology Letters.134 (2): 104-12.