Human CD70 / CD27L / TNFSF7 Protein (Fc Tag)

Catalog Number: 10780-H01H

General Information

Gene Name Synonym:

CD27L; CD27LG; TNFSF7

Protein Construction:

A DNA sequence encoding the extracellular domain of human CD70 (NP_001243.1) (Gln 39-Pro 193) was fused with the Fc region of human IgG1 at the N-terminus via a polypeptide linker.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized Human CD27 His (Cat:10039-H08B1) at 2 μg/ml (100 μl/well) can bind Human CD70 hFc (Cat:10780-H01H), the EC_{50} of Human CD70 hFc is 15-60 ng/mL.

Endotoxin:

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

Predicted N terminal: Glu 20

Molecular Mass:

The recombinant human CD70/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 413 amino acids and predicts a molecular mass of 45.5 kDa. As a result of different glycosylation, the rh CD70/Fc migrates as several bands with the approximate molecular mass of 55-60, 110-120 and 160-170 kDa corresponding to the monomeric, dimeric and trimeric form respectively 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℃.

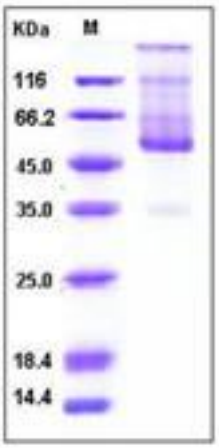
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CD70, a member of the tumor necrosis factor superfamily, is restricted to activated T-and B-lymphocytes and mature dendritic cells. Binding of CD70 to its receptor, CD27, is important in priming, effector functions, differentiation and memory formation of T-cells as well as plasma and memory B-cell generation. Tight control of CD70 expression is required to prevent lethal immunodeficiency. By selective transcription, CD70 is largely confined to activated lymphocytes and dendritic cells (DC). As a type II transmembrane receptor, CD70 is normally expressed on a subset of B, T and NK cells, where it plays a costimulatory role in immune cell activation. Immunohistochemical analysis of CD70 expression in multiple carcinoma types. The restricted expression pattern of CD70 in normal tissues and its widespread expression in various malignancies makes it an attractive target for antibody-based therapeutics. Investigations to exploit CD70 as a cancer target have lead to the identification of potential antibody-based clinical candidates.

References

1.Adam PJ, et al. (2006) CD70 (TNFSF7) is expressed at high prevalence in renal cell carcinomas and is rapidly internalised on antibody binding. Br J Cancer. 95(3): 298-306.
2.Keller AM, et al. (2007) Costimulatory ligand CD70 is delivered to the immunological synapse by shared intracellular trafficking with MHC class II molecules. Proc Natl Acad Sci U S A. 104(14): 5989-94.
3.Grewal IS. (2008) CD70 as a therapeutic target in human malignancies. Expert Opin Ther Targets. 12(3): 341-51.