

Human CD70 / CD27L / TNFSF7 Protein (Fc Tag)

Catalog Number: 10780-H01H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CD70, CD70 / CD27L / TNFSF7, CD70 / CD27L / TNFSF7G, 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: Human Cells

QC Testing

Purity: (72.6+18.6) % as determined by SDS-PAGE

Bio-Activity

Measured by its binding ability in a functional ELISA.

1. Immobilized mouse CD27 at 2 µg/mL (100 µl/well) can bind human CD70 with a linear range of 78-1250 pg/ml.
2. Immobilized mouse CD27 / Fc at 2 µg/mL (100 µl/well) can bind biotinylated human CD70 with a linear range of 0.39-12.5 ng/ml.
3. Immobilized human CD27 / Fc at 2 µg/mL (100 µl/well) can bind biotinylated human CD70 with a linear range of 0.39-12.5 ng/ml.

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 °C

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 and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

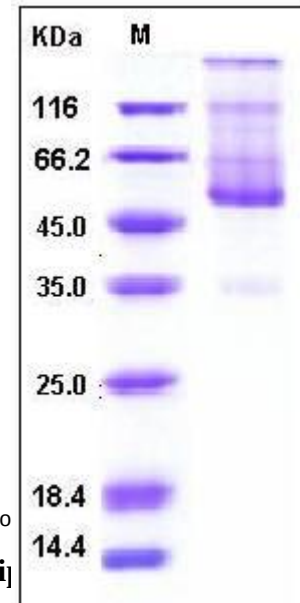
Usage Guide

Storage:

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

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution

the products.

Protein Description

CD70, also known as CD27 ligand (CD70 / CD27L / TNFSF7), is a member of the tumor necrosis factor superfamily (ie. TNFSF7) and a surface antigen found on activated T-and B-lymphocytes and mature dendritic cells. CD70 is a single-pass type III transmembrane glycoprotein consisting of a short cytoplasmic domain (1-17aa), a transmembrane domain (18-38 aa) and a 155aa extracellular domain (39-193), and exists as a homotrimer in vivo. Binding of CD70 to its receptor CD27 induces in priming, effector functions, differentiation and memory formation of T-cells, and thus is involved in the biological processes including T-cell activation, the proliferation of costimulated T-cells, as well as the generation of cytolytic T-cells. CD70 expression on malignant cells coupled with its highly restricted expression on normal cells makes CD70 an attractive target for monoclonal antibody -based therapies.

References

1. Goodwin R.G. et al., 1993, Cell 73:447-456
2. Boursalian T.E. et al., 2009, Adv Exp Med Biol. 647:108-119.
3. Bowman M.R. et al., 1994, J. Immunol. 152:1756-1761.
4. McEarchern J.A. et al., 2008, Clin Cancer Res. 14 (23):7763-7772.
5. Tesselaar, K. et al., 2002, J. Immunol. 169: 33-40.

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