

## CD70 Protein, Human, Recombinant (hFc)

### General Information

Synonyms:	TNFSF7;CD27L;CD27LG;CD70 molecule
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. Predicted N terminal: Glu 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P32970-1
Molecular Weight:	45.5 kDa (predicted); 55-60, 110-120 and 160-170 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized Human CD27 His <sub>6</sub> at 2 µg/ml (100 µl/well) can bind Human CD70 hFc, the EC <sub>50</sub> of Human CD70 hFc is 15-60 ng/mL.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

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 led to the identification of potential antibody-based clinical candidates. Cancer Immunotherapy Co-stimulatory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Proteins Immune Checkpoint Targets Immunotherapy Targeted Therapy

### Reference

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.

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.

Grewal IS. (2008) CD70 as a therapeutic target in human malignancies. *Expert Opin Ther Targets*. 12(3): 341-51.

Boursalian TE, et al. (2009) Targeting CD70 for human therapeutic use. *Adv Exp Med Biol*. 647: 108-19.

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