

# PRODUCT INFORMATION



## CD27L/CD70 Extracellular Domain (human, recombinant)

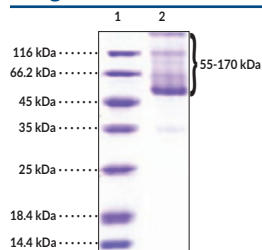
Item No. 31835

### Overview and Properties

**Synonyms:** CD27L, TNFSF7, TNF Superfamily Member 7  
**Source:** Active recombinant N-terminal human IgG1 Fc-tagged CD70 expressed in HEK293 cells  
**Amino Acids:** 39-193  
**Uniprot No.:** P32970  
**Molecular Weight:** 45.5 kDa  
**Storage:** -80°C (as supplied)  
**Stability:** ≥1 year  
**Purity:** ≥90% estimated by SDS-PAGE  
**Supplied in:** Lyophilized from sterile PBS, pH 7.4  
**Endotoxin Testing:** <1.0 EU/μg, determined by the LAL endotoxin assay  
**Bioactivity:** See figures for details

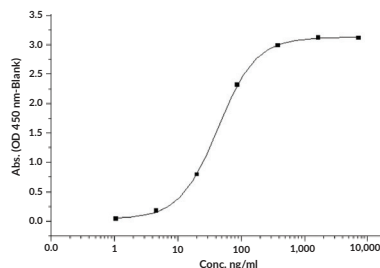
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Images

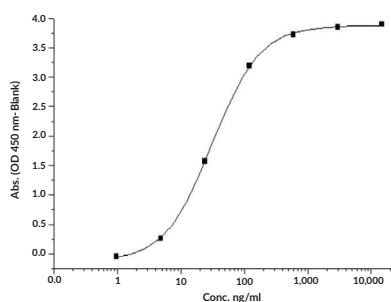


Lane 1: MW Markers  
Lane 2: CD70 Extracellular Domain

**SDS-PAGE Analysis of CD70 Extracellular Domain.** This protein has a calculated molecular weight of 45.5 kDa. As a result of glycosylation, the monomer migrates at approximately 55-60, 110-120, and 160-170 kDa, corresponding to the monomeric, dimeric and trimeric forms, respectively, by SDS-PAGE under reducing conditions.



Measured by its binding ability in a binding assay. Immobilized human CD70 at 10 μg/ml (100 μl/well) can bind mouse CD27 with a linear range of 70-90 ng/ml.



Measured by its binding ability in a binding assay. Immobilized human CD70 at 10 μg/ml (100 μl/well) can bind human CD27 with a linear range of 40-60 ng/ml.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
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# PRODUCT INFORMATION



## Description

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CD70, also known as CD27 ligand (CD27L), is a type II transmembrane glycoprotein and member of the tumor necrosis factor (TNF) ligand superfamily (TNFSF).<sup>1</sup> It is comprised of an N-terminal extracellular domain, a transmembrane domain, a stalk region, and a C-terminal TNF homology domain and is exclusively expressed on activated T and B cells and mature dendritic cells.<sup>1-3</sup> CD70 forms homotrimers and binds to its receptor, CD27 (Item No. 31828), on antigen-primed T cells, which induces NF- $\kappa$ B and MAPK signaling through TNF receptor-associated factors (TRAFs) and, when the T cell is stimulated by other factors, induces PI3K signaling to induce the co-stimulation and expansion of naïve CD4<sup>+</sup> and CD8<sup>+</sup> T cells.<sup>1,4</sup> CD70 is overexpressed in various hematological malignancies and is associated with accelerated tumor cell proliferation.<sup>3</sup> CD70 expression is negatively correlated with overall survival in patients with diffuse malignant mesothelioma of the pleura. Cayman's CD27L/CD70 Extracellular Domain (human, recombinant) protein can be used for binding assay applications. This protein is a disulfide-linked homodimer. The reduced monomer, comprised of CD70 (amino acids 39-193) fused to human IgG Fc at its N-terminus, consists of 413 amino acids and has a calculated molecular weight of 45.5 kDa. As a result of glycosylation, the monomer migrates at approximately 55-60, 110-120, and 160-170 kDa, corresponding to the monomeric, dimeric and trimeric forms, respectively, by SDS-PAGE under reducing conditions.

## References

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1. Wajant, H. Therapeutic targeting of CD70 and CD27. *Expert Opin. Ther. Targets* **20(8)**, 959-973 (2016).
2. Prasad, K.V.S., Ao, Z., Yoon, Y., *et al.* CD27, a member of the tumor necrosis factor receptor family, induces apoptosis and binds to Siva, a proapoptotic protein. *Proc. Nat. Acad. Sci. USA* **94(12)**, 6346-6351 (1997).
3. Inaguma, S., Lasota, J., Czapiewski, P., *et al.* CD70 expression correlates with a worse prognosis in malignant pleural mesothelioma patients via immune evasion and enhanced invasiveness. *J. Pathol.* **250(2)**, 205-216 (2020).
4. Wyzgol, A., Müller, N., Fick, A., *et al.* Trimer stabilization, oligomerization, and antibody-mediated cell surface immobilization improve the activity of soluble trimers of CD27L, CD40L, 41BBL, and glucocorticoid-induced TNF receptor ligand. *J. Immunol.* **183(3)**, 1851-1861 (2009).

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