

## CD70 Protein, Cynomolgus (HEK293, His)

Cat. No.:	HY-P77620
Synonyms:	CD70 molecule; CD70; TNFSF7; CD27 Ligand; CD27-L; CD27LG; Ki-24 antigen; TNFSF7G
Species:	Cynomolgus
Source:	HEK293
Accession:	G7PYU6 (Q39-P194)
Gene ID:	/
Molecular Weight:	60-90 kDa

### PROPERTIES

<b>Biological Activity</b>	Immobilized Cynomolgus CD27 Ligand at 2 µg/mL (100µL/Well) on the plate. Dose response curve for Cynomolgus/Rhesus macaque CD27 with the EC <sub>50</sub> of 60.8 ng/mL determined by ELISA.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

CD70 (CD27 Ligand) belongs to the tumor necrosis factor (TNF) family, is the ligand for TNFRSF27/CD27<sup>[1]</sup>. CD70 and CD27 are homotrimer type II and homodimer type I transmembrane glycoprotein, expressing on activated and resting T and B lymphocytes, respectively<sup>[3][4]</sup>. CD70 as one of the most frequently mutated genes in a series of diffuse large B cell lymphomas, especially acts in a crucial Epstein-Barr virus (EBV)-specific T cell immunity and more generally for the immune surveillance of B cells. CD70 inhibits EBV infection by restoring the expansion of EBV-specific T lymphocytes stimulated by the CD70-deficient EBV-infected B cells<sup>[3]</sup>.

CD70 involves in activation of innate and adaptive immunity, expressing in the mature dendritic cells and being up-regulated upon the triggering of CD40 or Toll-like receptors<sup>[2]</sup>.

CD70 induces proliferation of costimulated T cells, enhances the generation of cytolytic T cells, and contributes to T cell activation<sup>[4]</sup>.

CD70 is also reported to play a role in regulating B-cell activation, cytotoxic function of natural killer cells, and immunoglobulin synthesis<sup>[5]</sup>. targeting CD70 positive tumors with CAR-T cells induces a potent antitumor response<sup>[6]</sup>.

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## REFERENCES

- [1]. Bowman MR, et al. The cloning of CD70 and its identification as the ligand for CD27. *J Immunol.* 1994 Feb 15;152(4):1756-61.
  - [2]. Jacobs J, et al. CD70: An emerging target in cancer immunotherapy. *Pharmacol Ther.* 2015 Nov;155:1-10.
  - [3]. Izawa K, et al. Inherited CD70 deficiency in humans reveals a critical role for the CD70-CD27 pathway in immunity to Epstein-Barr virus infection. *J Exp Med.* 2017 Jan;214(1):73-89.
  - [4]. Brown GR, et al. CD27-CD27 ligand/CD70 interactions enhance alloantigen-induced proliferation and cytolytic activity in CD8+ T lymphocytes. *J Immunol.* 1995 Apr 15;154(8):3686-95.
  - [5]. Kobata T, et al. CD27-CD70 interactions regulate B-cell activation by T cells. *Proc Natl Acad Sci U S A.* 1995 Nov 21;92(24):11249-53.
  - [6]. Jin L, et al. CD70, a novel target of CAR T-cell therapy for gliomas. *Neuro Oncol.* 2018 Jan 10;20(1):55-65.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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