

## CD70 Protein, Mouse (HEK293, Fc)

|                          |  |
|--------------------------|--|
| <b>Cat. No.:</b>         | HY-P72928  |
| <b>Synonyms:</b>         | CD70 antigen; CD70; CD27 ligand; CD27LG; TNFSF7; CD27L |
| <b>Species:</b>          | Mouse  |
| <b>Source:</b>           | HEK293   |
| <b>Accession:</b>        | Q05A52 (Q47-P195)                                      |
| <b>Gene ID:</b>          | 21948  |
| <b>Molecular Weight:</b> | Approximately 43.1 kDa                                 |

### PROPERTIES

|                                |   |
|--------------------------------|---|
| <b>AA Sequence</b>             | <p>           QQQRLLLEHPE PHTAELQLNL TVPRKDPTLR WGAGPALGRS<br/>           FTHGPELEEG HLR IHQDGLY RLHIQVTLAN CSSPGSTLQH<br/>           RATLAVGICS PAAHGISLLR GRFGQDCTVA LQRLTYLVHG<br/>           DVLCTNLTLP LLPSRNADET FFGVQWICP         </p> |
| <b>Biological Activity</b>     | Measured by its binding ability in a functional ELISA.  |
| <b>Appearance</b>              | Lyophilized powder.   |
| <b>Formulation</b>             | Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants 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 (with carrier protein). 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

|                   |  |
|-------------------|--|
| <b>Background</b> | <p>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>. As for a widely use of CD70 in animal disease model, the sequence of amino acids in mouse is very different from human (56.25%) and rat (77.20%).</p> <p>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</p> |
|-------------------|--|

---

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>.

---

## 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.
- [7]. Boursalian TE, et al. Targeting CD70 for human therapeutic use. *Adv Exp Med Biol.* 2009;647:108-19.
- [8]. Arens R, et al. Signaling through CD70 regulates B cell activation and IgG production. *J Immunol.* 2004 Sep 15;173(6):3901-8.
- 

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA