

CD70 Protein, Rat (HEK293, His)

| | |
|--------------------------|--|
| Cat. No.: | HY-P72930 |
| Synonyms: | CD70 antigen; CD70; CD27 ligand; CD27LG; TNFSF7; CD27L |
| Species: | Rat |
| Source: | HEK293 |
| Accession: | NP_001100348 (Q46-P195) |
| Gene ID: | 301132 |
| Molecular Weight: | Approximately 28 kDa |

PROPERTIES

| | |
|--------------------------------|--|
| AA Sequence | <p> Q H V L L E P P E L H V A E L Q L N L T D P Q K D L T L R W G A G P A L G R S F T H G P G L E K G N L R I H Q D G I Y R L H I Q V T L A N C S S S G S A L Q H R A S L V V G I C S P A V H I I S L L R R R F G Q D C T V S L Q R L T P L A R G D V L C S N L T Q P L L P S R N A D E T F F G V Q R V Y P W P </p> |
| Biological Activity | Measured by its binding ability in a functional ELISA. Immobilized CD70 Protein, Rat (HEK293, His) at 10µg/mL (100µL/well) can bind mouse CD27-hFc and the EC ₅₀ is 10-50 ng/mL. |
| Appearance | Lyophilized powder. |
| Formulation | 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. |
| Endotoxin Level | <1 EU/µg, determined by LAL method. |
| Reconstitution | It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. |
| Storage & Stability | 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. |
| Shipping | Room temperature in continental US; may vary elsewhere. |

DESCRIPTION

| | |
|-------------------|---|
| Background | <p>CD70 (CD27 Ligand) belongs to the tumor necrosis factor (TNF) family, is the ligand for TNFRSF27/CD27^[1]. CD70 and CD27 are homotrimer type II and homodimer type I transmembrane glycoprotein, expressing on activated and resting T and B lymphocytes, respectively^{[3][4]}. As for a widely use of CD70 in animal disease model, the sequence of amino acids in rat is very different from human (55.79%) and mouse (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</p> |
|-------------------|---|

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^[3].

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^[2].

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

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

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.
-

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

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