

CD70 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P72741
Synonyms:	CD70 antigen; CD70; CD27 ligand; CD27LG; TNFSF7; CD27L
Species:	Mouse
Source:	HEK293
Accession:	Q05A52 (Q47-P195)
Gene ID:	21948
Molecular Weight:	25-30 kDa

PROPERTIES

AA Sequence	<p> QQQRLLEHPE PHTAELQLNL TVPRKDPTLR WGAGPALGRS FTHGPELEEG HLRIHQDGLY RLHIQVTLAN CSSPGSTLQH RATLAVGICS PAAHGISLLR GRFGQDCTVA LQRLTYLVHG DVLCTNLTLP LLPSRNADET FFGVQWICP </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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 wildly 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 EBV infection by restoring the expansion of EBV-specific T lymphocytes stimulated by the CD70-deficient EBV-infected B cells^[3].</p>
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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

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- [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.
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