

CD30 Ligand/TNFSF8 Protein, Human (HEK293, mFc)

Cat. No.:	HY-P78405
Synonyms:	CD153; CD30 Ligand; CD30L; CD30-L; CD30LGMGC138144; TNFSF8; CD30LG
Species:	Human
Source:	HEK293
Accession:	P32971 (Q63-D234)
Gene ID:	944
Molecular Weight:	62-68 kDa

PROPERTIES

Biological Activity	Immobilized Human CD30, His Tag at 0.2µg/ml (100µl/well) on the plate. Dose response curve for Human CD30 Ligand, mFc (IgG2a) Tag with the EC ₅₀ of 31.9ng/ml determined by ELISA.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant 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

CD30 Ligand (CD30L) is a B cell surface antigen and a ligand for CD30 (TNFRSF8), playing an inhibitory role in CD40-mediated immunoglobulin class switching^[1].

CD30L is a type II membrane-associated glycoprotein belonging to the tumor necrosis factor (TNF) family, structurally related to tumour necrosis superfamily members TNF alpha, TNF beta, and CD40^{[1][3]}.

CD30L enhances cell proliferation of some lymphoma cell lines, while to induce cell death and reduce cell proliferation of other lymphoma cell lines to play a pathophysiologic role in Hodgkin's and some non-Hodgkin's lymphomas. CD30L also enhances release of cytokine IL-6, TNF, LT-α^[2].

CD30L exerts pleiotropic effects on normal and malignant lymphoid cells, including death, differentiation, or cell division regulation^[3].

CD30L is mainly expressed on activated T cells, B cells, macrophages and DCs, while CD30/CD30L mainly expressed on the surface of activated CD4+ T cells in the lamina propria (LP), especially at the early stage of Th17 cell differentiation. CD30L deficiency could inhibit Th17 cell differentiation and production of IL-17A in the intestinal mucosa^[4].

CD30L acts as a pro-inflammatory cytokines, is involved in the adaptive immune response in ulcerative colitis (UC), the level of which shows positive correlation with the severity of UC^[5].

REFERENCES

- [1]. Cerutti A, et al. CD30 is a CD40-inducible molecule that negatively regulates CD40-mediated immunoglobulin class switching in non-antigen-selected human B cells. *Immunity*. 1998 Aug;9(2):247-56.
- [2]. Gruss H-J, et al. CD30 ligand, a member of the TNF ligand superfamily, with growth and activation control CD30+ lymphoid and lymphoma cells. *Leuk Lymphoma*. 1996 Feb;20(5-6):397-409.
- [3]. Pera MF, et al. CD30 and its ligand: possible role in regulation of teratoma stem cells. *APMIS*. 1998 Jan;106(1):169-72; discussion 173.
- [4]. Wang X, et al. CD30L/CD30 signaling regulates the formation of the tumor immune microenvironment and inhibits intestinal tumor development of colitis-associated colon cancer in mice. *Int Immunopharmacol*. 2020 Jul;84:106531.
- [5]. Mei C, et al. CD30L+ classical monocytes play a pro-inflammatory role in the development of ulcerative colitis in patients. *Mol Immunol*. 2021 Oct;138:10-19.
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Caution: Product has not been fully validated for medical applications. For research use only.

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