

CD30L Protein, Human, Recombinant (hFc)

General Information

Synonyms:	CD153;CD30L;tumor necrosis factor (ligand) superfamily, member 8;CD30LG
Protein Construction:	A DNA sequence encoding the extracellular domain (Gln 63-Asp 234) of human CD30 Ligand (NP_001235.1) was fused with the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Arg 23
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P32971
Molecular Weight:	47.8 kDa (predicted); 60-65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized human CD30L-hFc at 2 µg/ml (100 µl/well) can bind human CD30/TNFRSF8-Fch, the EC50 of human CD30/TNFRSF8-Fch is 15-60 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

CD30 ligand (CD30L), also known as CD153 and TNFSF8, is a membrane-associated glycoprotein belonging to the TNF superfamily and TNFR superfamily, and is a specific ligand for CD30/TNFRSF8 originally described as a cell surface antigen and a marker for Hodgkin lymphoma and related hematologic malignancies. CD30L is a type-II

membrane glycoprotein expressed on activated T cells, stimulated monocyte-macrophages, granulocytes, eosinophils, and some Burkitt-like lymphoma cell lines. CD30L is capable of transducing signals through CD30 on different CD30+ lymphoma cell lines, and mediates pleiotropic biologic effects including cell proliferation, activation, differentiation, as well as cell death by apoptosis. CD30-CD30 ligand interaction has been suggested to have a pathophysiologic role in malignant lymphomas, particularly Hodgkin disease, large cell anaplastic lymphomas and Burkitt lymphomas, and is also involved in activation and functioning of the T cell-dependent immune response. Thus, CD153 and its receptor CD30 are regarded as therapeutic targets in hematologic malignancies, autoimmune and inflammatory diseases.

Reference

- Hargreaves PG, et al. (2002) Soluble CD30 binds to CD153 with high affinity and blocks transmembrane signaling by CD30. *Eur J Immunol.* 32(1): 163-73.
- Blazar BR, et al. (2004) CD30/CD30 ligand (CD153) interaction regulates CD4+ T cell-mediated graft-versus-host disease. *J Immunol.* 173(5): 2933-41.
- Oflazoglu E, et al. (2009) Targeting CD30/CD30L in oncology and autoimmune and inflammatory diseases. *Adv Exp Med Biol.* 647: 174-85.

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