Data Sheet (Cat.No.TMPY-01672)

TargetMol

B7-H2/ICOSLG Protein, Human, Recombinant (His)

General Information

Synonyms:	B7RP-1;ICOSLG;ICOS ligand;GL50;inducible T-cell co-stimulator ligand;CD275;LICOS;B7RP1; ICOS-L;ICOSL;B7-h2;B7H2
Protein Construction:	A DNA sequence encoding the human ICOSLG (NP_056074.1) extracellular domain (Met 1-Ser 258) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	A0N0L8
Molecular Weight:	28 kDa (predicted); 42-62 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized Recombinant Human ICOS / AILIM / CD278 Protein (Fc Tag) at 2 μg/mL (100 μL/well) can bind Recombinant Human ICOS Ligand / B7-H2 / ICOSLG Protein (ECD,His Tag), the EC50 is 18-56 ng/mL.
Purity:	> 98 % as determined by SDS-PAGE. > 95 % as determined by SEC-HPLC.
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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Inducible co-stimulator ligand (ICOSL), also known as B7-H2, is a member of the B7 family of co-stimulatory molecules related to B7-1 and B7-2. It is a transmembrane glycoprotein with extracellular IgV and IgC domains and binds to ICOS on activated T cells, thus delivers a positive costimulatory signal for optimal T cell function. The

structural features of ICOSL are crucial for its costimulatory function. The present study shows that ICOSL displays a marked oligomerization potential, resembling more like B7-1 than B7-2. B7-H2-dependent signaling may play an active role in a proliferative response rather than in cytokine and chemokine production. The CD28/B7 and ICOS/B7-H2 pathways are both critical for costimulating T cell immune responses. Deficiency in either pathway results in defective T cell activation, cytokine production, and germinal center formation.Cancer ImmunotherapyCo-stimulatory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint Detection: AntibodiesImmune Checkpoint Detection: ELISA AntibodiesImmune Checkpoint Detection: FCM AntibodiesImmune Checkpoint Detection: WB AntibodiesImmune Checkpoint TargetsImmunotherapyTargeted Therapy

Reference

Flesch IE. (2002) Inducible costimulator-ligand (ICOS-L). J Biol Regul Homeost Agents. 16(3): 217-9.
Kajiwara K, et al. (2009) Expression and function of the inducible costimulator ligand B7-H2 in human airway smooth muscle cells. Allergol Int. 58(4): 573-83.
Wong SC, et al. (2009) Functional hierarchy and relative contribution of the CD28/B7 and ICOS/B7-H2 costimulatory pathways to T cell-mediated delayed-type hypersensitivity. Cell Immunol. 256(1-2): 64-71.