

Active Recombinant Human ICOSLG protein, Fc/Avi-tagged, Biotinylated

Cat. No. ICOSLG-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human ICOSLG(Ala19-Thr139) protein, fused to Fc/Avi tag at the C-terminus, was expressed in HEK293 cells .
Species	Human
Source	HEK293
ProteinLength	Ala19-Thr139
Description	B7-H2, also known as B7-related protein (B7RP1), ICOS Ligand, and CD275, is an approximately 60 kDa transmembrane glycoprotein in the B7 family of immune regulatory molecules (1). Mature human B7-H2 consists of a 238 amino acid (aa) extracellular domain (ECD) with two immunoglobulin-like (Ig-like) domains, a 21 aa transmembrane segment, and a 25 aa cytoplasmic domain (2, 3). Within the ECD, human B7-H2 shares 50% and 54% aa sequence identity with mouse and rat B7-H2, respectively. Alternative splicing generates a long isoform (Isoform 2), which carries a 10 aa substitution for the C-terminal 3 residues, and a short isoform (Isoform 3; this product), which lacks the first Ig-like domain (aa 18 - 134 is missing). B7-H2 is expressed on antigen presenting cells such as B cells, macrophages, monocytes, and dendritic cells (2-6). It binds to ICOS on activated T cells, leading to both positive and negative effects on immune responses including its own down-regulation (2, 4, 7). Mouse and human B7-H2 exhibit cross-species binding to ICOS (3, 6). The B7-H2 interaction with ICOS is

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costimulatory for T cell proliferation as well as the development of B cells, plasma cells, follicular helper T cells (TFH) and germinal centers (2-4, 8, 9). In human but not in mouse, B7-H2 additionally binds to CD28 and CTLA4, and its interaction with CD28 can costimulate both human and mouse naïve T cells and regulatory T cells (Treg) (6). B7-H2 contributes to the development of allergic asthma by enhancing Th2 biased immune responses, limiting Th17 responses, and promoting eosinophilic infiltration into the lung (8, 10, 11). Its activation of ICOS on Treg limits pulmonary inflammation and airway hyperresponsiveness, promotes the development of inhalational tolerance, and impairs anti-tumor immunity (5, 12, 13). In contrast, its ligation of ICOS on TFH cells can increase the severity of autoimmune symptoms (9). A soluble form of human B7-H2 is elevated in the circulation of patients with active systemic lupus erythematosus (14). In the thyroid, B7-H2 is up-regulated on thyrocytes during inflammation and promotes their proliferation and production of thyroid hormones (15).

Predicted N Terminal	Ala19
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Human ICOS Fc Chimera is immobilized at 10 µg/mL, 100 µL/well, the concentration of Biotinylated Recombinant ICOSLG Fc Chimera Avi-tag that produces 50% of the optimal binding response is approximately 10-50 µg/mL.
Molecular Mass	61-70 kDa, under reducing conditions
Endotoxin	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by

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	Coomassie® Blue Staining.
Applications	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 400 µg/mL in PBS.
Conjugation	Biotin

GENE INFORMATION

Gene Name	ICOSLG inducible T-cell co-stimulator ligand [Homo sapiens]
Official Symbol	ICOSLG
Synonyms	ICOSLG; inducible T-cell co-stimulator ligand; ICOSL; ICOS ligand; B7 homolog 2; B7 homologue 2; B7 H2; B7 related protein 1; B7H2; B7RP 1; B7RP1; CD275; GL50; ICOS L; KIAA0653; B7-like protein GL50; B7-related protein 1; transmembrane protein B7-H2 ICOS ligand; B7-H2; LICOS; B7RP-1; ICOS-L;
Gene ID	23308
mRNA Refseq	NM_015259
Protein Refseq	NP_056074
MIM	605717

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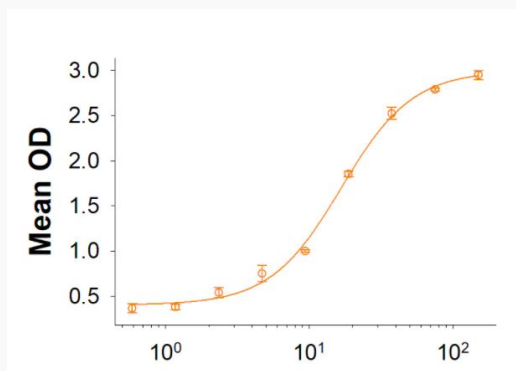
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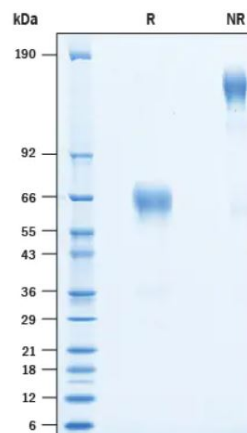
UniProt ID

O75144

Binding Activity



SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

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