

## ICOS Protein, Mouse, Recombinant (hFc)

### General Information

Synonyms:	H4;CRP-1;AILIM;Ly115;CCLP;inducible T-cell co-stimulator
Protein Construction:	A DNA sequence encoding the mouse ICOS (Q9WVS0) extracellular domain (Met 1-Leu 142) was fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Glu 21
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q9WVS0
Molecular Weight:	40.9 kDa (predicted)

### QC Testing

Biological Activity:	Immobilized Recombinant Mouse ICOS Ligand / B7-H2 / ICOSLG Protein (His Tag) at 2 µg/ml (100 µl/well) can bind Recombinant Mouse ICOS / AILIM / CD278 Protein (Fc Tag), the EC50 is 100-300 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.

*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 costimulator (ICOS), also called AILIM (Activation-Inducible Lymphocyte Immunomediatory Molecule) is a cell-surface receptor and belongs to the CD28 family of immune costimulatory receptors consisting of CD28, CTLA-4, and PD-1. The interaction of B7-H2/ICOS plays a critical role in Th cell differentiation, T-B cell interactions which are essential for the germinal center formation, and humoral immune responses, and as well as the production of

cytokine IL-4. Also, ICOS is more potent in the induction of IL-10 production, a cytokine important for the suppressive function of T regulatory cells. The B7-1/B7-2--CD28/CTLA-4 and ICOS-B7RP-1 pathway provide key second signals that can regulate the activation, inhibition, and fine-tuning of T-lymphocyte responses. ICOS stimulates both Th1 and Th2 cytokine production but may have a preferential role in Th2 cell development. Moreover, The B7-1/B7-2-CD28/CTLA-4 and ICOS-B7RP-1 pathway has been suggested as being involved in the development of airway inflammation and airway hyperresponsiveness. Cancer Immunotherapy Co-stimulatory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Proteins Immune Checkpoint Targets Immunotherapy Targeted Therapy

### Reference

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Chen YQ, et al. (2006) CD28/CTLA-4--CD80/CD86 and ICOS--B7RP-1 costimulatory pathway in bronchial asthma. Allergy. 61(1): 15-26.

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