Data Sheet (Cat.No.TMPY-06209)

TargetMol

ICOS Protein, Mouse, Recombinant (His)

General Information

Synonyms:	CCLP;CRP-1;Ly115;AILIM;inducible T-cell co-stimulator;H4
Protein Construction:	A DNA sequence encoding the mouse ICOS (NP_034643.2) (Met1-Gln135) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Glu 21
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q5SUZ7
Molecular Weight:	13.9 kDa (predicted); 22.7 and 19.7 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized Recombinant Mouse ICOS Protein (His Tag) at 2 μg/ml (100 μl/well) can bind Recombinant Mouse ICOS Ligand / B7-H2 / ICOSLG Protein (His & Fc Tag), The EC50 is 60-160 ng/mL.
Purity:	> 90 % 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, pH7.4. 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 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 ImmunotherapyCo-stimulatory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint ProteinsImmune Checkpoint TargetsImmunotherapyTargeted 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.

van Berkel ME, et al. (2006) CD28 and ICOS: similar or separate costimulators of T cells Immunol Lett. 105(2): 115-22.