10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ICOS

Catalog # PVGS1591

Product Information

Primary Accession	Q9Y6W8
Species	Human
Sequence	Glu21-Phe141
Purity	> 90% as analyzed by SDS-PAGE
Endotoxin Level	
Expression System	HEK 293
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 μg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	29851
Other Names	Inducible T-cell costimulator, Activation-inducible lymphocyte immunomediatory molecule, CD278, ICOS, AILIM
Target Background	Inducible T-cell costimulator is an immune checkpoint protein that in humans is encoded by the ICOS gene. CD278 or ICOS (Inducible T-cell COStimulator) is a CD28-superfamily costimulatory molecule that is expressed on activated T cells. It is thought to be important for Th2 cells in particular. The protein encoded by this gene belongs to the CD28 and CTLA-4 cell-surface receptor family. It forms homodimers and plays an important role in cell-cell signaling, immune responses and regulation of cell proliferation.

Protein Information

Name	ICOS
Synonyms	AILIM

Function	Stimulatory receptor expressed in activated or antigen- experienced T-cells that plays an important role in the immune response (PubMed:9930702). Upon binding to its ligand ICOSL expressed on antigen presenting cells (APCs), delivers costimulatory signals that enhances all basic T-cell responses to a foreign antigen, namely proliferation, secretion of lymphokines including IL10, up-regulation of molecules that mediate cell-cell interaction, and effective help for antibody secretion by B-cells (PubMed:33033255). Also acts as a costimulatory receptor critical for the differentiation of T follicular regulatory cells upon immune challenges such as viral infection (PubMed:27135603). Mechanistically, potentiates TCR-induced calcium flux by augmenting PLCG1 activation and actin remodeling (By similarity). In addition, activates PI3K signaling pathways independently of calcium flux (PubMed:30523347). Essential both for efficient interaction between T and B-cells and for normal antibody responses to T-cell dependent antigens. Prevents the apoptosis of pre-activated T-cells. Plays a critical role in CD40-mediated class switching of immunoglobin isotypes (By similarity).
Cellular Location	[Isoform 1]: Cell membrane; Single-pass type I membrane protein
Tissue Location	Activated T-cells. Highly expressed on tonsillar T- cells, which are closely associated with B-cells in the apical light zone of germinal centers, the site of terminal B-cell maturation Expressed at lower levels in thymus, lung, lymph node and peripheral blood leukocytes. Expressed in the medulla of fetal and newborn thymus

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.