

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human ICOS protein		
	Human ICOS (Glu21-Lys140) Accession # Q9Y6W8	HHHHHH	IEGR
	N-terminus		C-terminus
N-terminal Sequence Analysis	Glu21		
Structure / Form			
Predicted Molecular Mass	15 kDa		

SPECIFICATIONS

SDS-PAGE	18-36 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human B7-H2 Fc Chimera (Catalog # 165-B7) is coated at 0.5 µg/mL, 100 µL/well, Recombinant Human ICOS binds with an ED ₅₀ of 0.7-3.5 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<ul style="list-style-type: none"> ● 12 months from date of receipt, ≤ -20 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, ≤ -20 °C under sterile conditions after reconstitution.

DATA

<p>Binding Activity</p> <p>When Recombinant Human B7-H2 Fc Chimera (Catalog # 165-B7) is immobilized at 0.5 µg/mL, Recombinant Human ICOS His-tag (Catalog # 9945-CS) binds with an ED₅₀ of 0.7-3.5 ng/mL.</p>	<p>SDS-PAGE</p> <p>2 µg/lane of Recombinant Human ICOS was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 18-36 kDa and 40-72 kDa, respectively.</p>
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BACKGROUND

Inducible co-stimulator (ICOS), also called AILIM (activation-inducible lymphocyte immunomediatory molecule) and CRP-1 (CD28-related protein-1), is a member of the CD28 family of immune costimulatory receptors (1). Other family members are CD28, CTLA-4 and PD-1 (2, 4). Human ICOS is a homodimeric type I transmembrane protein consisting of 199 amino acids (aa) with a putative 20 aa signal sequence, a 121 aa extracellular domain, a 23 aa transmembrane region, and a 35 aa cytoplasmic domain. ICOS shares approximately 39% amino acid similarity with CD28 and CTLA-4. Human and mouse ICOS share approximately 72% amino acid identity. ICOS is expressed on most CD45RO⁺ cells (3). ICOS expression is up-regulated within approximately 24-48 hours of activation on Th primed cells (2, 4, 6). ICOS has been shown to have a role in the expansion of Th17 cells by regulating IL-21 production (8). B7-H2, a member of the B7 family of co-stimulatory ligands, has been identified as the ICOS ligand (4, 6). The B7-H2/ICOS interaction appears to play roles in T cell dependent B cell activation and Th differentiation (5, 7).

References:

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