

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived human ICOS protein		
	Human ICOS (Glu21-Phe141) Accession # Q9Y6W8	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Glu21		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	40.3 kDa (monomer)		

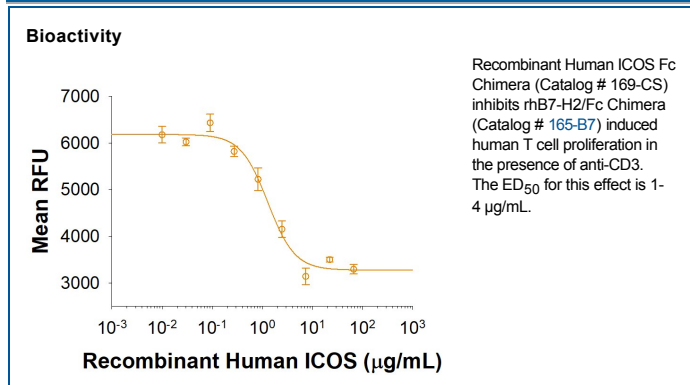
SPECIFICATIONS

SDS-PAGE	50-60 kDa, reducing conditions
Activity	Measured by its ability to inhibit human T cell proliferation induced by rhB7-H2/Fc Chimera in the presence of anti-CD3. Wang, S. <i>et al.</i> (2000) Blood 96 :2808. The ED ₅₀ for this effect is 1-4 µg/mL in the presence of 3 µg/mL Recombinant Human B7-H2 Fc Chimera (Catalog # 165-B7) and at least 20 ng/mL of anti-CD3. Optimal dilutions should be determined by each laboratory for each application.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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.

DATA



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 growing CD28 family of immune costimulatory receptors. Other family members are CD28, CTLA-4 and PD-1. 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. ICOS expression is up-regulated within approximately 24 - 48 hours of activation on T_H primed cells. B7-H2, a member of the B7 family of co-stimulatory ligands, has been identified as the ICOS ligand. The B7-H2/ICOS interaction appears to play roles in T cell dependent B cell activation and T_H differentiation.

References:

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4. Gonzalo, J.A. *et al.* (2001) J. Immunol. **166**:1.
5. Hutloff, A. *et al.* (1999) Nature **397**:263.
6. Mages, H.W. *et al.* (2000) Eur. J. Immunol. **30**:1040.
7. Yoshinaga, S.K. *et al.* (1999) Nature **402**:827.