Recombinant Human ICOS mFc Chimera

Catalog Number: 11423-CS

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human ICOS protein

Human ICOS (Glu21-Lys140) Accession # Q9Y6W8.1	IEGRMD	Mouse IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Glu21
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	41 kDa

SPECIFICATIONS

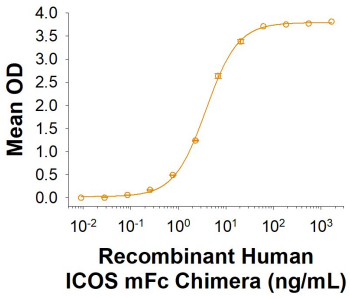
SDS-PAGE	54-60 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Recombinant Human ICOS mFc Chimera (Catalog # 11423-CS) binds to Recombinant Human B7-H2 Fc Chimera Protein (Catalog # 165-B7) with a ED_{50} of 1.50-15.0 ng/mL.
Endotoxin Level	<0.10 EU per 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 250 µg/mL in 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.** • 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.

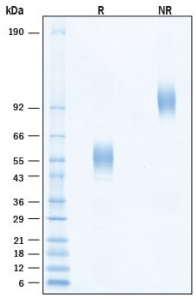
DATA

Binding Activity



Recombinant Human ICOS mFc Chimera Protein Binding Activity. Measured by its binding ability in a functional ELISA. Recombinant Human ICOS mFc Chimera Protein (Catalog # 11423-CS) binds to Recombinant Human B7-H2 Fc Chimera Protein (Catalog # 165-B7) with a ED_{50} of 1.50-15.0 ng/mL.

SDS-PAGE



Recombinant Human ICOS mFc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Human ICOS mFc Chimera Protein (Catalog # 11423-CS) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 54-60 kDa and 108-120 kDa, respectively.

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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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4. Gonzalo, J.A. *et al.* (2001) J. Immunol. **166**:1.
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