

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human ICOS in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 669222
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0 mouse myeloma cell line transfected with human ICOS and mouse myeloma cell line NS0-derived recombinant human ICOS cocktail Glu21-Phe141 Accession # Q9Y6W8
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human peripheral blood mononuclear cells (PBMCs) treated with PMA and calcium ionomycin

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Inducible costimulator (ICOS), also called ALLIM (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 costimulatory 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:

- Aicher, A. *et al.* (2000) *J. Immunol.* **164**:4689.
- Coyle, A.J. *et al.* (2000) *Immunity* **13**:95.
- Coyle, A.J. and J.C. Gutierrez-Ramos (2001) *Nat. Immunol.* **2**:203.
- Gonzalo, J.A. *et al.* (2001) *J. Immunol.* **166**:1.
- Hutloff, A. *et al.* (1999) *Nature* **397**:263.
- Mages, H.W. *et al.* (2000) *Eur. J. Immunol.* **30**:1040.
- Yoshinaga, S.K. *et al.* (1999) *Nature* **402**:827.

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