

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ICOS in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 669222
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	NS0 mouse myeloma cell line transfected with human ICOS and mouse myeloma cell line NS0-derived recombinant human ICOS cocktail Glu21-Phe141 Accession # Q9Y6W8
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	Human peripheral blood mononuclear cells (PBMCs) treated with PMA and calcium ionomycin

## PREPARATION AND STORAGE

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

## BACKGROUND

Inducible costimulator (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<sup>+</sup> cells. ICOS expression is up-regulated within approximately 24-48 hours of activation on T<sub>H</sub> 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<sub>H</sub> 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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