### DESCRIPTION

**Species Reactivity**  
Human

**Specificity**  
Detects human ICOS in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse ICOS is observed.

**Source**  
Polyclonal Goat IgG

**Purification**  
Antigen Affinity-purified

**Immunogen**  
Mouse myeloma cell line NS0-derived recombinant human ICOS Glu21-Phe141  
Accession # Q9Y6W8

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

### 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.

<table>
<thead>
<tr>
<th>Western Blot</th>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td></td>
<td>0.1 μg/mL</td>
<td>Recombinant Human ICOS Fc Chimera (Catalog # 169-CS)</td>
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</table>

| Immunohistochemistry | 5-15 μg/mL | See Below |

### DATA

**Immunohistochemistry**  
ICOS in Human Tonsil. ICOS was detected in immersion fixed paraffin-embedded sections of human tonsil using Goat Anti-Human ICOS Antigen Affinity-purified Polyclonal Antibody (Catalog # AF169) at 15 μg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

### PREPARATION AND STORAGE

**Reconstitution**  
Reconstitute at 0.2 mg/mL in sterile PBS.

**Shipping**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

**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.  
  - 6 months, -20 to -70 °C under sterile conditions after reconstitution.

### BACKGROUND

Inducible costimulator (ICOS), also called AILIM (activation-inducible lymphocyte intermediomediatory 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<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><sub>1</sub> differentiation.

**References:**


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