Alexa Fluor® 647 Armenian Hamster Anti-ICOS (CD278)

Product Information

**Material Number:** 565882

**Alternate Name:** ICOS; AILIM; H4; Inducible T-cell costimulator; CVID1; Ly115

**Size:** 0.1 mg

**Concentration:** 0.2 mg/ml

**Clone:** C398.4A

**Immunogen:** Mouse D10.G4.1 T-cell clone

**Isotype:** Armenian Hamster IgG

**Reactivity:**
- QC Testing: Human
- Tested in Development: Mouse
- Reported Reactivity: Rat, Rhesus

**Storage Buffer:** Aqueous buffered solution containing ≤0.09% sodium azide.

**Description**

The C398.4A monoclonal antibody specifically binds to Inducible Costimulator (ICOS), which is also known as, CD278, Activation-inducible lymphocyte immunomediatory molecule (AILIM), or H4. ICOS is a type I transmembrane glycoprotein that forms a disulfide-linked homodimer and belongs to the CD28 family within the Ig superfamily. ICOS is expressed on either CD4+ or CD8+ single-positive mature thymocytes, T cells, or subsets of Innate Lymphoid Cells (ILC). Its expression is upregulated on activated T lymphocytes. ICOS is a costimulatory receptor that can bind to the B7-H2 ligand (CD275, ICOS-L) that is expressed on B cells, monocytes, macrophages, dendritic cells, and endothelial cells. ICOS plays a critical role in many types of T cell-dependent immunity. In the case of humoral immunity, for example, ICOS signaling is critical for the differentiation of T follicular helper (Tfh) cells and development of germinal centers. Although C398.4A was generated against mouse ICOS, this antibody reportedly crossreacts with human, rhesus, and rat ICOS.

### Analysis of ICOS (CD278) Expression

**Left Panel - Two-color flow cytometric analysis of ICOS (CD278) expression on human peripheral blood lymphocytes.** Whole blood was stained with PE Mouse Anti-Human CD3 antibody (Cat. No. 555333/561808/561809) and either no antibody (Alexa Fluor® 647 Autofluorescence Control; Top Plot) or Alexa Fluor® 647 Hamster Anti-ICOS (CD278) antibody (Cat. No. 565882/565883; Bottom Plot). Erythrocytes were lysed with BD FACSLyser Lysing Solution (Cat. No. 349202). Two-color flow cytometric contour plots showing the correlated expression of ICOS (CD278) [or Alexa Fluor® 647 Autofluorescence] versus CD3 were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes.

**Right Panel - Multicolor flow cytometric analysis of ICOS (CD278) expression on mouse thymocytes.** Mouse thymocytes were preincubated with Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with PE Rat Anti-Mouse CD4 (Cat. No. 553048/553049/561837) and BD Horizon™ BUV737 Rat Anti-Mouse CD8a (Cat. No. 564297) antibodies, and either no antibody (Alexa Fluor® 647 Autofluorescence Control; dashed line histograms) or Alexa Fluor® 647 Hamster Anti-ICOS (CD278) antibody (solid line histograms). The fluorescence histograms showing ICOS (CD278) expression (or Alexa Fluor® 647 Autofluorescence) were derived from CD4 and CD8 gated events with the forward and side light-scatter characteristics of viable thymocytes as indicated.

Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.
Preparation and Storage
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

Flow cytometry

Suggested Companion Products

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<th>Name</th>
<th>Size</th>
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<td>C398.4A</td>
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<td>555333</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References


BD Biosciences

bdbiosciences.com

United States Canada Europe Japan Asia Pacific Latin America/Caribbean
877.232.8995 866.979.9408 32.2.400.98.95 0120.855.90 65.6861.0633 55.11.5185.9995

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