

**Alexa Fluor® 647 anti-human/mouse/rat CD278 (ICOS)**

**Catalog # / Size:** 2167580 / 100 µg  
2167575 / 25 µg

**Clone:** C398.4A

**Isotype:** Hamster IgG

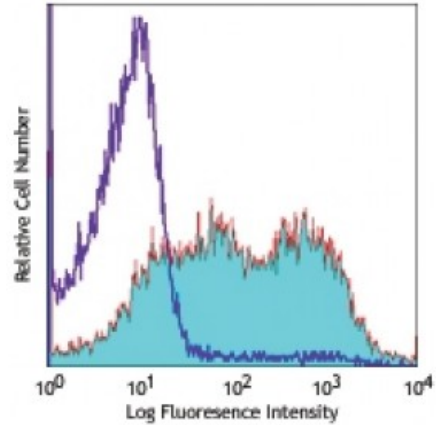
**Immunogen:** Mouse T cell clone D10.G4.1

**Reactivity:** Rat

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Concentration:** 0.5

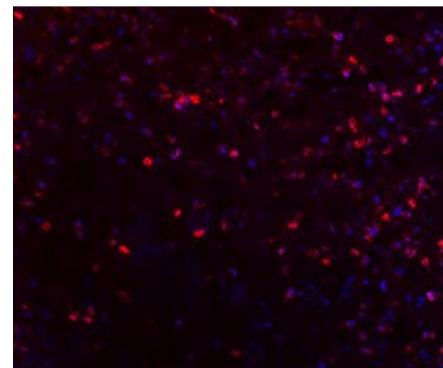


PHA-stimulated human peripheral blood lymphocytes (3 days) stained with C398.4A Alexa Fluor® 647

**Applications:**

**Applications:** Immunofluorescence

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.25 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.



\* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 nm.

**Application Notes:** The C398.4A antibody is useful for flow cytometric analysis and is able to costimulate T cell activation and proliferation. Additional reported applications (for the relevant formats) include: immunoprecipitation<sup>1</sup> and *in vitro* costimulation of T cell activation<sup>1,3,4</sup>. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 313512).

Frozen mouse lymph node section detected with anti-ICOS Alexa Fluor® 647 (red) and CD4 biotin, followed by BV421™ streptavidin (blue) secondary detection. Images were acquired with an automated widefield microscope (Nikon Eclipse Ti) and a CCD

**Application References:**

1. Redoglia V, *et al.* 1996. *Eur. J. Immunol.* 26:2781. (FC IP Costim)
2. Yagi J, *et al.* 2003. *J. Immunol.* 171:783. (FC)
3. Arimura Y, *et al.* 2002. *Int. Immunol.* 14:555. (Costim)
4. Arimura Y, *et al.* 2004. *J. Biol. Chem.* 279:11408. (Costim)

**Description:** ICOS, also known as inducible costimulatory molecule and H4, is a 47-57 kD protein. This protein is homologous to the CD28/CTLA-4 proteins. ICOS is

expressed on activated T cells and a subset of thymocytes. It is able to costimulate T cells proliferation. In addition, ICOS is involved in humoral immune responses (B cell germinal center formation). The ICOS ligand is B7h/B7RP-1 or B7-H2. ICOS stimulation has been shown to potentiate TCR-mediated IL-4 and IL-10 production and has been proposed to play a role in Th2 cell development.

**Antigen  
References:**

1. Redoglia V, *et al.* 1996. *Eur. J. Immunol.* 26:2781.
2. Hutloff A, *et al.* 1999. *Nature* 397:263.
3. Buonfiglio D, *et al.* 2000. *Eur. J. Immunol.* 30:3463.
4. Coyle AJ, *et al.* 2