

# Product Data Sheet

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

**Catalog # / Size:** 313515 / 25 µg  
313516 / 100 µg

**Clone:** C398.4A

**Isotype:** Armenian Hamster IgG

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

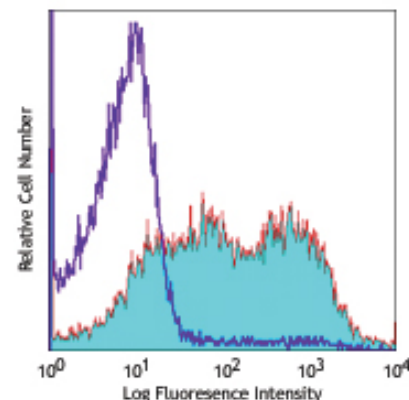
**Reactivity:** Human, Mouse, Rat, **Cross-Reactivity:** Rhesus, Swine (Pig, Porcine)

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

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

**Concentration:** 0.5 mg/ml

**Storage:** The antibody solution should be stored undiluted at 4°C and protected from prolonged exposure to light. **Do not freeze.**



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

## Applications:

**Applications:** FC - Quality tested  
IHC, IF - Reported in the literature

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is ≤0.25 µg per million cells in 100 µl 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.

\*\* Alexa Fluor® 647 is a registered trademark of Molecular Probes, Inc. Alexa Fluor® 647 dye antibody conjugates are sold under license from Molecular Probes, Inc. for research use only, except for use in combination with microarrays and high content screening, and are covered by pending and issued patents.

**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>, immunohistochemical staining of acetone-fixed frozen sections, 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).

**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.* 2000. *Immunity* 13:95.

### Related Products:

**Product**  
Cell Staining Buffer  
Alexa Fluor® 647 Armenian Hamster IgG Isotype Ctrl  
Human TruStain FcX™ (Fc Receptor Blocking Solution)

**Clone**  
HTK888

**Application**  
FC, ICC, ICFC  
FC, ICFC  
FC, ICC, ICFC



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