

Spark PLUS UV395™ anti-human/mouse/rat CD278 (ICOS) Antibody

Catalog# / Size	313565 / 25 µg 313566 / 100 µg
Clone	C398.4A
Regulatory Status	RUO
Other Names	Inducible COStimulatory molecule, H4
Isotype	Armenian Hamster IgG
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.

Product Details

Verified Reactivity	Human, Mouse, Rat
Reported Reactivity	African Green, Baboon, Cynomolgus, Rhesus, Pig
Antibody Type	Monoclonal
Host Species	Armenian Hamster
Immunogen	Mouse T cell clone D10.G4.1
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with Spark PLUS UV395™ under optimal conditions.
Concentration	0.2 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
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 ≤ 1.0 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. * Spark PLUS UV395™ has a maximum excitation of 355 nm and a maximum emission of 385 nm.
Excitation Laser	Ultraviolet Laser (355 nm)

Application Notes

1. 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: immunoprecipitation¹, *in vitro* costimulation of T cell activation^{1,3,4}, and spatial biology (IBEX)^{5,6}. 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

(PubMed link indicates BioLegend citation)

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)
5. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
6. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

RRID AB_3683327 (BioLegend Cat. No. 313565)
AB_3683327 (BioLegend Cat. No. 313566)

Antigen Details

Structure	CD28/CTLA-4, 47-57 kD
Distribution	Activated T cells, subset of thymocytes
Function	Costimulates T cell activation, proliferation, humoral immune response
Ligand/Receptor	B7h/B7RP-1/GL-50
Cell Type	T cells, Thymocytes, Tregs
Biology Area	Costimulatory Molecules, Immunology
Molecular Family	CD Molecules
Antigen References	1. Redoglia V, <i>et al.</i> 1996. <i>Eur. J. Immunol.</i> 26:2781. 2. Hutloff A, <i>et al.</i> 1999. <i>Nature</i> 397:263. 3. Buonfiglio D, <i>et al.</i> 2000. <i>Eur. J. Immunol.</i> 30:3463. 4. Coyle AJ, <i>et al.</i> 2000. <i>Immunity</i> 13:95.
Gene ID	100048841 29851 64545

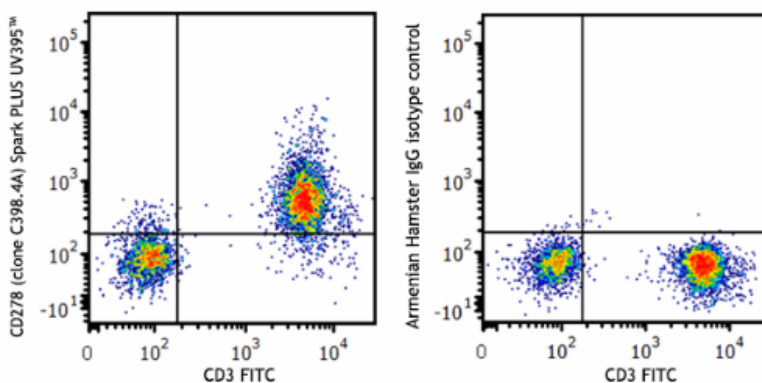
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

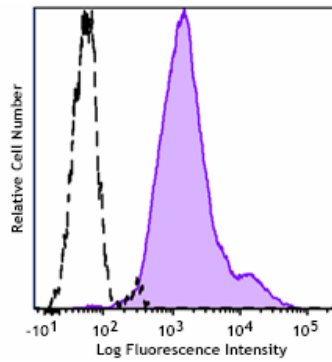
Other Formats

Purified anti-human/mouse/rat CD278 (ICOS), Biotin anti-human/mouse/rat CD278 (ICOS), FITC anti-human/mouse/rat CD278 (ICOS), PE anti-human/mouse/rat CD278 (ICOS), APC anti-human/mouse/rat CD278 (ICOS), Alexa Fluor® 488 anti-human/mouse/rat CD278 (ICOS), Alexa Fluor® 647 anti-human/mouse/rat CD278 (ICOS), PerCP/Cyanine5.5 anti-human/mouse/rat CD278 (ICOS), PE/Cyanine7 anti-human/mouse/rat CD278 (ICOS), Pacific Blue™ anti-human/mouse/rat CD278 (ICOS), Brilliant Violet 421™ anti-human/mouse/rat CD278 (ICOS), Brilliant Violet 510™ anti-human/mouse/rat CD278 (ICOS), APC/Cyanine7 anti-human/mouse/rat CD278 (ICOS), PE/Dazzle™ 594 anti-human/mouse/rat CD278 (ICOS), Alexa Fluor® 700 anti-human/mouse/rat CD278 (ICOS), APC/Fire™ 750 anti-human/mouse/rat CD278 (ICOS), Brilliant Violet 785™ anti-human/mouse/rat CD278 (ICOS), Brilliant Violet 605™ anti-human/mouse/rat CD278 (ICOS), Ultra-LEAF™ Purified anti-human/mouse/rat CD278 (ICOS), GolnVivo™ Purified anti-human/mouse/rat CD278 (ICOS), Brilliant Violet 711™ anti-human/mouse/rat CD278 (ICOS), Brilliant Violet 650™ anti-human/mouse/rat CD278 (ICOS), TotalSeq™-B0171 anti-human/mouse/rat CD278 (ICOS), TotalSeq™-C0171 anti-human/mouse/rat CD278 (ICOS), TotalSeq™-A0171 anti-human/mouse/rat CD278 (ICOS), Brilliant Violet 750™ anti-human/mouse/rat CD278 (ICOS), TotalSeq™-D0171 anti-human/mouse/rat CD278 (ICOS) Antibody, PE/Cyanine5 anti-human/mouse/rat CD278 (ICOS), Spark Red™ 718 anti-human/mouse/rat CD278 (ICOS), Spark PLUS UV395™ anti-human/mouse/rat CD278 (ICOS), StarBright UltraViolet 740 anti-human/mouse/rat CD278 (ICOS), StarBright UltraViolet 795 anti-human/mouse/rat CD278 (ICOS), Spark Blue™ 550 anti-human/mouse/rat CD278 (ICOS) Antibody

Product Data



Human peripheral blood lymphocytes were stained with anti-human CD3 (clone UCHT1) FITC and anti-human/mouse/rat CD278 (ICOS) (clone C398.4A) Spark PLUS UV395™ (left) or Armenian hamster IgG Spark PLUS UV395™ isotype control (right).



PHA-stimulated human peripheral blood lymphocytes (3 days) were stained with anti-human/mouse/rat CD278 (ICOS) (clone C398.4A) Spark PLUS UV395™ (filled histogram) or Armenian hamster IgG Spark PLUS UV395™ isotype control (open histogram).

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form, used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587