Spark Blue™ 550 anti-human/mouse/rat CD278 (ICOS) Antibody

Catalog# / Size	313573 / 25 µg 313574 / 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 Blue™ 550 under optimal conditions.
Concentration	0.5 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 Blue™ 550 has a maximum excitation of 516 nm and a maximum emission of 540 nm.
Excitation Laser	Blue Laser (488 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: immunoprecipitation[1], *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_3717177 (BioLegend Cat. No. 313573) AB_3717177 (BioLegend Cat. No. 313574)

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, *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.
Gene ID	100048841 29851 64545

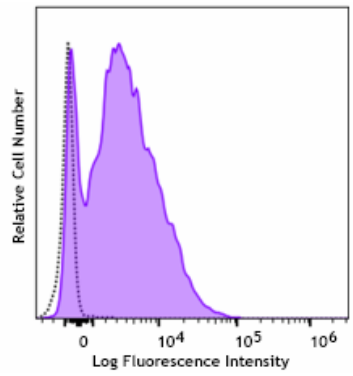
Related Protocols

- Cell Surface Flow Cytometry Staining Protocol

Other Formats

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

Product Data



PHA-stimulated (3 days) human peripheral blood lymphocytes were stained with anti-human/mouse/rat CD278 (ICOS) (clone C398.4A) Spark Blue™ 550 (filled histogram). Open histogram represents unstained cells.

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