Alexa Fluor® 647 anti-human CD39 Antibody

Catalog# / Size	328257 / 25 tests 328258 / 100 tests
Clone	A1
Regulatory Status	RUO
Workshop	HCDM listed
Other Names	gp80, E-ATPDase, NTPDase-1, ecto-apyrase, Ec3.6.1.5
Isotype	Mouse IgG1, κ
Description	Human CD39 is an integral membrane protein with two transmembrane domains. It exists as a homotetramer. Expression of CD39 is found on activated lymphocytes, a subset of T cells and B cells, and dendritic cells with weak staining on monocytes and granulocytes. CD39 and CD73 have been found on regulatory T cells, specifically the effector/memory like T cells. CD39 can hydrolyze both nucleoside triphosphates and diphosphates. CD39 is the dominant ecto nucleotidase of vascular and placental trophoblastic tissues and appears to modulate the functional expression of type 2 purinergic (P2) G protein coupled receptors (GPCRs). CD39 has intrinsic ecto-ATPase activity. Expression of CD39 is induced on T cells and increased on B cells as a late activation antigen.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	PHA activated human lymphocytes
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
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 IHC-P - Verified
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 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. For immunohistochemistry on formalin-fixed paraffin-embedded tissue sections, a concentration of 10.0 µg/mL is suggested. * Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Red Laser (633 nm)
Application Notes	The A1 antibody binds to the human CD39 cell surface antigen and has been shown to block MHC independent target cell recognition by hapten-specific CTL. Additional reported applications (for the relevant formats) include: *in vitro* CD39 blockade[3], immunofluorescence[4], immunohistochemistry[6], and spatial biology (IBEX)[7,8]. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for blocking assays (contact our custom solutions team).

Application References

(PubMed link indicates BioLegend citation)

1. Aversa GG, *et al.* 1988. *Transplant. P.* 20:4952.
2. Aversa GG, *et al.* 1989. *Transplant. P.* 21:34950.
3. Borsellino G, *et al.* 2007. *Blood*. 110:1225. (Block)
4. Stockl J, *et al.* 2001. *J. Immunol.* 167:2724. (IF)
5. Sestak K, *et al.* 2007. *Vet. Immunol. Immunopathol.* 119:21.
6. Lyck L, *et al.* 2008. *J. Histochem. Cytochem.* 56:201. (IHC)
7. Radtke AJ, *et al*. 2020. *Proc Natl Acad Sci USA*. 117:33455-33465. (SB) PubMed
8. Radtke AJ, *et al*. 2022. *Nat Protoc*. 17:378-401. (SB) PubMed

RRID

AB_3683342 (BioLegend Cat. No. 328257)
AB_3683342 (BioLegend Cat. No. 328258)

Antigen Details

Distribution	Activated lymphocytes, and also on a subset of T cells, regulatory T cells, B cells, and dendritic cells.
Cell Type	B cells, Dendritic cells, Lymphocytes, T cells, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules
Gene ID	953

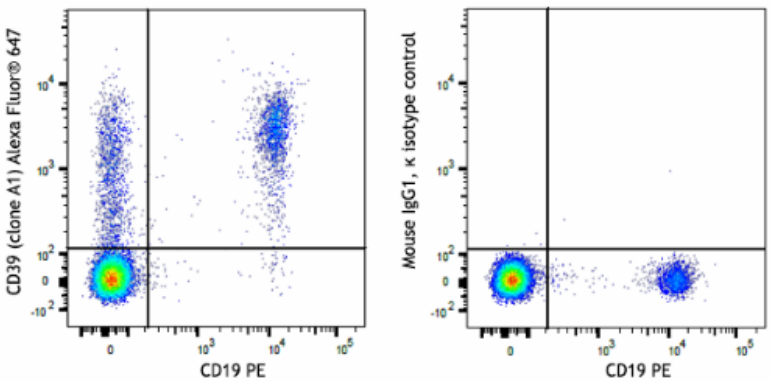
Related Protocols

- Cell Surface Flow Cytometry Staining Protocol
- Immunohistochemistry Protocol for Paraffin-Embedded Sections

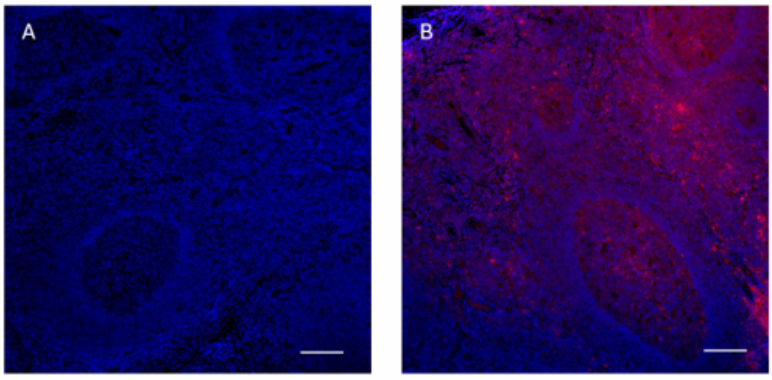
Other Formats

Brilliant Violet 510™ anti-human CD39, Brilliant Violet 421™ anti-human CD39, Purified anti-human CD39, Biotin anti-human CD39, FITC anti-human CD39, PE anti-human CD39, APC anti-human CD39, PE/Cyanine7 anti-human CD39, PerCP/Cyanine5.5 anti-human CD39, Purified anti-human CD39 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD39, APC/Cyanine7 anti-human CD39, Brilliant Violet 711™ anti-human CD39, APC/Fire™ 750 anti-human CD39, Alexa Fluor® 594 anti-human CD39, TotalSeq™-A0176 anti-human CD39, Brilliant Violet 605™ anti-human CD39, TotalSeq™-C0176 anti-human CD39, Brilliant Violet 785™ anti-human CD39, TotalSeq™-B0176 anti-human CD39, TotalSeq™-D0176 anti-human CD39, PE/Fire™ 810 anti-human CD39 Antibody, PE/Cyanine5 anti-human CD39, PerCP/Fire™ 806 anti-human CD39, Spark NIR™ 685 anti-human CD39, Spark Red™ 718 anti-human CD39 (Flexi-Fluor™), PE/Fire™ 744 anti-human CD39, Alexa Fluor® 700 anti-human CD39, Spark Blue™ 574 anti-human CD39 (Flexi-Fluor™), Spark Blue™ 550 anti-human CD39 (Flexi-Fluor™), Alexa Fluor® 647 anti-human CD39, Spark PLUS UV395™ anti-human CD39

Product Data



Human peripheral blood lymphocytes were stained with anti-human CD19 (clone HIB19) PE and anti-human CD39 (clone A1) Alexa Fluor® 647 (left) or mouse IgG1, κ Alexa Fluor® 647 isotype control (right).



IHC staining of Alexa Fluor® 647 anti-human CD39 (clone A1) on formalin-fixed paraffin-embedded human tonsil tissue. After antigen retrieval using 1X Citric Buffered Saline (Cat. No. 420902), the tissue was incubated without (panel A) or with (panel B) 10 µg/mL of Alexa Fluor® 647 anti-human CD39 (clone A1) overnight at 4°C. Nuclei were counterstained with DAPI (Cat. No. 422801). Images were captured with a 10X objective. Scale bar: 200 µm

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