Brilliant Violet 711™ anti-human CD69 Antibody

Catalog# / Size	310943 / 25 tests 310944 / 100 tests
Clone	FN50
Regulatory Status	RUO
Workshop	IV A91
Other Names	Very Early Activation Antigen (VEA), Activation inducer molecule (AIM)
Isotype	Mouse IgG1, κ
Description	CD69 is a 27-33 kD type II transmembrane protein also known as activation inducer molecule (AIM), very early activation antigen (VEA), and MLR3. It is a member of the C-type lectin family, expressed as a disulfide-linked homodimer. Other members of this receptor family include NKG2, NKR-P1 CD94, and Ly49. CD69 is transiently expressed on activated leukocytes including T cells, thymocytes, B cells, NK cells, neutrophils, and eosinophils. CD69 is constitutively expressed by a subset of medullary mature thymocytes, platelets, mantle B cells, and certain $CD4^+$ T cells in germinal centers of normal lymph nodes. CD69 is involved in early events of lymphocyte, monocyte, and platelet activation, and has a functional role in redirected lysis mediated by activated NK cells.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Chimpanzee, Cynomolgus, Pigtailed Macaque, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
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 Brilliant Violet 711™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. Brilliant Violet 711™ excites at 405 nm and emits at 711 nm. The bandpass filter 710/50 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 711™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™. This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.
Excitation Laser	Violet Laser (405 nm)

Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections[2], immunofluorescence microscopy[3], and spatial biology (IBEX)[8,9].
Application References **(PubMed link indicates BioLegend citation)**	1. Knapp WB, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York. 2. Sakkas LI, *et al.* 1998. *Clin. and Diag. Lab. Immunol.* 5:430. (IHC) 3. Kim JR, *et al.* 2005. *BMC Immunol.* 6:3. (IF) 4. Verjans GM, *et al.* 2007. *P. Natl. Acad. Sci. USA* 104:3496. 5. Lu H, *et al.* 2009. *Toxicol Sci.* 112:363. (FC) PubMed 6. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) PubMed 7. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC) 8. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA*. 117:33455-33465. (SB) PubMed 9. Radtke AJ, *et al.* 2022. *Nat Protoc*. 17:378-401. (SB) PubMed
Product Citations	1. Weisberg SP, *et al.* 2020. Cell Reports. 29(12):3916-3932.e5.. PubMed 2. Szabo PA, *et al.* 2021. Immunity. 54(4):797-814.e6. PubMed 3. Verma A, *et al.* 2021. Cell Rep. 37:109942. PubMed 4. Lam AJ, *et al.* 2021. Cell Reports. 36(5):109494. PubMed 5. Poon MML, *et al.* 2021. Cell Rep. 37:110071. PubMed 6. Sagebiel AF, *et al.* 2019. Nat Commun. 10:975. PubMed
RRID	AB_2566465 (BioLegend Cat. No. 310943) AB_2566466 (BioLegend Cat. No. 310944)

Antigen Details

Structure	C-type lectin, type II glycoprotein, 28/32 kD
Distribution	Activated T cells, B cells, NK cells, granulocytes, thymocytes, platelets, Langerhans cells
Function	Lymphocyte, monocyte, and platelet activation, NK cell killing
Cell Type	B cells, Granulocytes, Langerhans cells, NK cells, Platelets, T cells, Thymocytes, Tregs
Biology Area	Costimulatory Molecules, Immunology
Molecular Family	CD Molecules
Antigen References	1. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. 2. Testi R, *et al.* 1994. *Immunol. Today* 15:479.
Gene ID	969

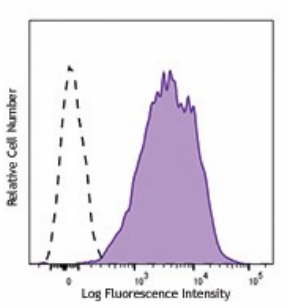
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Purified anti-human CD69, FITC anti-human CD69, PE anti-human CD69, PE/Cyanine5 anti-human CD69, APC anti-human CD69, APC/Cyanine7 anti-human CD69, PE/Cyanine7 anti-human CD69, Alexa Fluor® 488 anti-human CD69, Alexa Fluor® 647 anti-human CD69, Pacific Blue™ anti-human CD69, Alexa Fluor® 700 anti-human CD69, Biotin anti-human CD69, PerCP/Cyanine5.5 anti-human CD69, PerCP anti-human CD69, Brilliant Violet 421™ anti-human CD69, Brilliant Violet 785™ anti-human CD69, Brilliant Violet 650™ anti-human CD69, Brilliant Violet 510™ anti-human CD69, Brilliant Violet 605™ anti-human CD69, Purified anti-human CD69 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD69, Brilliant Violet 711™ anti-human CD69, APC/Fire™ 750 anti-human CD69, TotalSeq™-A0146 anti-human CD69, TotalSeq™-B0146 anti-human CD69, TotalSeq™-C0146 anti-human CD69, Brilliant Violet 750™ anti-human CD69, KIRAVIA Blue 520™ anti-human CD69, Spark NIR™ 685 anti-human CD69 Antibody, PE/Fire™ 640 anti-human CD69, Spark YG™ 581 anti-human CD69, TotalSeq™-D0146 anti-human CD69, Spark Blue™ 550 anti-human CD69

Product Data



PMA + ionomycin-stimulated (six hours) human peripheral blood lymphocytes were stained with CD69 (clone FN50) Brilliant Violet 711™ (filled histogram) or mouse IgG1, κ ™ isotype control (open histogram).

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