Alexa Fluor® 647 anti-human Perforin Antibody

Catalog# / Size	308109 / 25 tests 308110 / 100 tests
Clone	dG9
Regulatory Status	RUO
Other Names	PRF1, P1, PFP, HPLH2
Isotype	Mouse IgG2b, κ
Description	Perforin is a 70 kD cytolytic protein that is expressed in the cytoplasmic granules of cytotoxic T lymphocytes (CTLs) and natural killer (NK) cells. Perforin is one of the major effector molecules used by cytotoxic T cells and NK cells to mediate targeted cell lysis.

Product Details

Verified Reactivity	Human
Reported Reactivity	Cow
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Purified granules from the human lymphoma cell line
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, 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	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular 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. * Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm. 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	Clone dG9 primarily recognizes perforin associated with cytotoxic granules[9]. Additional reported applications (for the relevant formats) include: immunoprecipitation, intracellular flow cytometric analysis and immunofluorescence microscopy[5,7], and immunohistochemical staining of acetone-fixed frozen tissue sections and formalin-fixed paraffin-embedded tissue sections[1,4]. Does not cross-react with mouse[1].

Application References

(PubMed link indicates BioLegend citation)

1. Hameed A, *et al.* 1992. *Am. J. Pathol.* 140:1025. (IHC)
2. Schaerli P, *et al.* 2004. *J. Exp. Med.* 199:1265.
3. Watanabe N, *et al.* 1997. *Blood* 90:3662.
4. Mauad T, *et al.* 2004. *Pediatr. Pulmonol.* 38:233. (IHC)
5. Barrat FJ, *et al.* 1999. *P. Natl. Acad. Sci. USA* 96:8645. (IF)
6. Chen H, *et al.* 2005. *J. Immunol.* 175:591.

7. Bryceson YT, *et al.* 2007. *Blood* doi:10.1182/blood-2007-02-074468. (IF)
8. Wood SM, *et al.* 2009. *Blood* 114:4117. PubMed
9. Makedonas G, *et al.* 2010. *PLoS Pathog.* 6:e1000798.

Product Citations

1. Kim N, *et al.* 2022. Front Immunol. 12:792334. PubMed
2. Bezverbnaya K, *et al.* 2021. Cytotherapy. 23:820. PubMed
3. Sevilya Z, *et al.* 2018. Front Immunol. 9:2068. PubMed
4. Bryceson Y, *et al.* 2007. Blood. 110:1906. PubMed
5. Kim N, *et al.* 2017. Int J Mol Sci. 10.3390/ijms18061262. PubMed
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8. Orange E 2014. Proc Natl Acad Sci U S A. 111:6708. PubMed
9. Krzewski K, *et al.* 2008. Proc Natl Acad Sci U S A. 105:2568. PubMed
10. Peruzzi G, *et al.* 2013. J Immunol. 191:1883. PubMed
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14. Sanchez-Ruiz Y, *et al.* 2011. PLoS One. 6:e27057. PubMed
15. German Y, *et al.* 2021. Cell Reports. 36(1):109318. PubMed
16. Chitirala P, *et al.* 2020. eLife. 9:00. PubMed
17. Dutertre C, *et al.* 2008. J Leukoc Biol. 84:1511. PubMed
18. Xie CB, *et al.* 2020. J Clin Invest. 130:3437. PubMed
19. Salzer E, *et al.* 2016. Nat Immunol. 17:1352-1360. PubMed
20. Khazen R, *et al.* 2016. Nat Commun. 7:10823. PubMed

RRID

AB_493255 (BioLegend Cat. No. 308109)
AB_493254 (BioLegend Cat. No. 308110)

Antigen Details

Structure 70 kD

Distribution CTL, NK (cytoplasmic granules)

Function Mediates targeted cell lysis

Cell Type NK cells, T cells

Biology Area Cell Biology, Immunology, Innate Immunity, Neuroscience

Molecular Family Cytokines/Chemokines

Antigen References

1. Lieberman J. 2003. *Nat. Rev. Immunol.* 3:361.
2. Trapani J, *et al.* 2002. *Nat. Rev. Immunol.* 2:735.

Gene ID 5551

Related Protocols

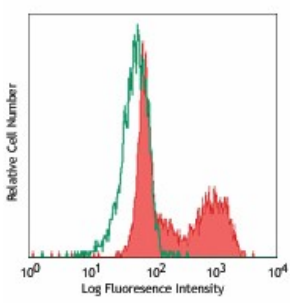
Surface and Intracellular Cytokine Staining for Flow Cytometry - Video

Intracellular Flow Cytometry Staining Protocol

Other Formats

FITC anti-human Perforin, PE anti-human Perforin, Purified anti-human Perforin, Alexa Fluor® 488 anti-human Perforin, Alexa Fluor® 647 anti-human Perforin, APC anti-human Perforin, Pacific Blue™ anti-human Perforin, PerCP/Cyanine5.5 anti-human Perforin, Brilliant Violet 510™ anti-human Perforin, Brilliant Violet 421™ anti-human Perforin, Alexa Fluor® 594 anti-human Perforin, APC/Cyanine7 anti-human Perforin, PE/Cyanine7 anti-human Perforin, Brilliant Violet 711™ anti-human Perforin, PE/Dazzle™ 594 anti-human Perforin

Product Data



Human peripheral blood mononuclear cells intracellularly stained with DG9 Alexa Fluor® 647

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