

## PE anti-human Perforin Antibody

<b>Catalog# / Size</b>	308105 / 25 tests 308106 / 100 tests
<b>Clone</b>	dG9
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	PRF1, P1, PFP, HPLH2
<b>Isotype</b>	Mouse IgG2b, κ
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Cow
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Purified granules from the human lymphoma cell line
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICFC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">intracellular immunofluorescent staining with flow cytometric analysis</a> . 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.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	Clone dG9 primarily recognizes perforin associated with cytotoxic granules <sup>9</sup> . Additional reported applications (for the relevant formats) include: immunoprecipitation, intracellular flow cytometric analysis and immunofluorescence microscopy <sup>5,7</sup> , and immunohistochemical staining of acetone-fixed frozen tissue sections and formalin-fixed paraffin-embedded tissue sections <sup>1,4</sup> .  Does not cross-react with mouse <sup>1</sup> .
<b>Application References</b>	<ol style="list-style-type: none"> <li>Hameed A, <i>et al.</i> 1992. <i>Am. J. Pathol.</i> 140:1025. (IHC)</li> <li>Schaerli P, <i>et al.</i> 2004. <i>J. Exp. Med.</i> 199:1265.</li> <li>Watanabe N, <i>et al.</i> 1997. <i>Blood</i> 90:3662.</li> <li>Mauad T, <i>et al.</i> 2004. <i>Pediatr. Pulmonol.</i> 38:233. (IHC)</li> <li>Barrat FJ, <i>et al.</i> 1999. <i>P. Natl. Acad. Sci. USA</i> 96:8645. (IF)</li> <li>Chen H, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:591.</li> <li>Bryceson YT, <i>et al.</i> 2007. <i>Blood</i> doi:10.1182/blood-2007-02-074468. (IF)</li> <li>Wood SM, <i>et al.</i> 2009. <i>Blood</i> 114:4117. <a href="#">PubMed</a></li> <li>Makedonas G, <i>et al.</i> 2010. <i>PLoS Pathog.</i> 6:e1000798.</li> </ol>

### Product Citations

1. Tang-Huau TL, *et al.* 2018. *Nat Commun.* 9:2570. [PubMed](#)
2. Seo IH, *et al.* 2021. *Immune Netw.* 21:e17. [PubMed](#)
3. Hejazi M, *et al.* 2022. *Front Immunol.* 12:798087. [PubMed](#)
4. Su S *et al.* 2018. *Cell.* 175(2):442-457. [PubMed](#)
5. Hegewisch-Solloa E, *et al.* 2021. *J Immunol.* 207:950. [PubMed](#)
6. Lettau M, *et al.* 2018. *Int Immunol.* 30:215. [PubMed](#)
7. Georg P, *et al.* 2022. *Cell.* 185:493. [PubMed](#)
8. Kuttruff S, *et al.* 2009. *Blood.* 113:358. [PubMed](#)
9. Van der Meer JM, *et al.* 2020. *Cancer Immunol Immunother.* . [PubMed](#)
10. Hu X, *et al.* 2020. *Neoplasia.* 1.290972222. [PubMed](#)
11. Van der Meer JMR, *et al.* 2021. *Oncoimmunology.* 10:1981049. [PubMed](#)
12. Liu CF, *et al.* 2017. *Front Immunol.* 1.445833333. [PubMed](#)
13. Bertino P, *et al.* 2014. *Vaccine.* 32:1670. [PubMed](#)

**RRID** AB\_314703 (BioLegend Cat. No. 308105)  
 AB\_314704 (BioLegend Cat. No. 308106)

## Antigen Details

<b>Structure</b>	70 kD
<b>Distribution</b>	CTL, NK (cytoplasmic granules)
<b>Function</b>	Mediates targeted cell lysis
<b>Cell Type</b>	NK cells, T cells
<b>Biology Area</b>	Cell Biology, Immunology, Innate Immunity, Neuroscience
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	1. Lieberman J. 2003. <i>Nat. Rev. Immunol.</i> 3:361. 2. Trapani J, <i>et al.</i> 2002. <i>Nat. Rev. Immunol.</i> 2:735.
<b>Gene ID</b>	<a href="#">5551</a>

## Related Protocols

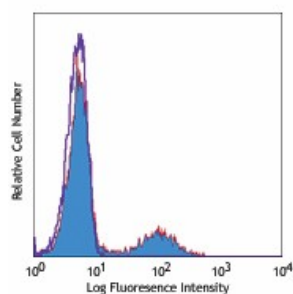
[Surface and Intracellular Cytokine Staining for Flow Cytometry - Video](#)

[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 lymphocytes intracellularly stained with dG9 PE

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