

## PE anti-human/mouse Granzyme B Recombinant Antibody

<b>Catalog# / Size</b>	372207 / 25 tests 372208 / 100 tests
<b>Clone</b>	QA16A02
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1, GZMB, CCP1, Asp-ase Granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1, GZMB, CCP1, Asp-ase
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	Granzyme B is a 32 kD serine protease, also known as granzyme-2, serine protease B, CCP1, Asp-ase, and CTLA-1. Granzyme B is abundantly stored in the granules of cytotoxic T lymphocytes and NK cells. Low level of expression has been reported in granulocytes, B cells, and activated dendritic cells. Granzyme B is crucial for rapid induction of cell death and apoptosis through interaction with mannose-6-phosphate receptor.

### Product Details

<b>Verified Reactivity</b>	Human, Mouse
<b>Antibody Type</b>	Recombinant
<b>Host Species</b>	Mouse
<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>Product Citations</b>	<ol style="list-style-type: none"> <li>Dong MB, <i>et al.</i> 2020. Cell. 178(5):1189-1204.e23.. <a href="#">PubMed</a></li> <li>Yang Z, <i>et al.</i> 2022. J Immunother Cancer. 10:.. <a href="#">PubMed</a></li> <li>Chen L, <i>et al.</i> 2022. Mol Ther Oncolytics. 24:522. <a href="#">PubMed</a></li> <li>Yang X, <i>et al.</i> 2021. Front Pharmacol. 12:771046. <a href="#">PubMed</a></li> <li>Liu X, <i>et al.</i> 2020. Nature. . <a href="#">PubMed</a></li> <li>Subham S, <i>et al.</i> 2022. Breast Cancer Res Treat. Online ahead of print. <a href="#">PubMed</a></li> <li>Ostendorf BN, <i>et al.</i> 2020. Nat Med. 26:1048. <a href="#">PubMed</a></li> <li>Fumagalli V, <i>et al.</i> 2020. J Exp Med. :217. <a href="#">PubMed</a></li> <li>Alsaleh G, <i>et al.</i> 2020. Elife. 9: . <a href="#">PubMed</a></li> <li>Guo W, <i>et al.</i> 2022. J Immunother Cancer. 10:.. <a href="#">PubMed</a></li> <li>Uchil PD <i>et al.</i> 2018. Cell host &amp; microbe. 25(1):87-100 . <a href="#">PubMed</a></li> <li>Jiang Y, <i>et al.</i> 2020. Clin Immunol. 218:108516. <a href="#">PubMed</a></li> <li>Hubrack S, <i>et al.</i> 2021. Sci Rep. 11:14090. <a href="#">PubMed</a></li> <li>Zhu S, <i>et al.</i> 2022. J Oncol. 2022:8724933. <a href="#">PubMed</a></li> <li>Su X, <i>et al.</i> 2022. J Transl Med. 20:378. <a href="#">PubMed</a></li> <li>Zhong G, <i>et al.</i> 2022. Oncoimmunology. 11:2114740. <a href="#">PubMed</a></li> <li>Zhang X, <i>et al.</i> 2020. Endocr Relat Cancer. 27:469. <a href="#">PubMed</a></li> <li>Yeo L, <i>et al.</i> 2018. J Clin Invest. 128:3460. <a href="#">PubMed</a></li> <li>Feng Y, <i>et al.</i> 2022. Life (Basel). 12:.. <a href="#">PubMed</a></li> </ol>

20. Chen Y, *et al.* 2022. Nat Commun. 13:4468. [PubMed](#)
21. Zheng Y, *et al.* 2022. J Immunol. 208:501. [PubMed](#)
22. Kim S, *et al.* 2020. Autophagy. :1. [PubMed](#)
23. Li Z, *et al.* 2020. J Immunol. 2589:204. [PubMed](#)
24. Li ZY, *et al.* 2021. J Exp Med. 218:. [PubMed](#)
25. Wang R, *et al.* 2022. J Immunother Cancer. 10:. [PubMed](#)
26. Nicolas-Boluda A, *et al.* 2021. eLife. 10:00. [PubMed](#)
27. Ruth JH, *et al.* 2021. JCI Insight. 6:e145662. [PubMed](#)
28. Ukidve A, *et al.* 2020. Proc Natl Acad Sci U S A. 117:17727. [PubMed](#)
29. Rudd CE, *et al.* 2020. Cell Reports. 30(7):2075-2082. [PubMed](#)
30. Khurana P, *et al.* 2021. Front Immunol. 12:700374. [PubMed](#)
31. Zhang L, *et al.* 2021. Mol Ther. 29:744. [PubMed](#)

**RRID** AB\_2687031 (BioLegend Cat. No. 372207)  
 AB\_2687032 (BioLegend Cat. No. 372208)

## Antigen Details

---

<b>Structure</b>	32 kD serine protease
<b>Distribution</b>	Cytotoxic T cells, NK cells, and neutrophils, low on granulocytes, B cells and activated dendritic cells
<b>Function</b>	Granzyme B is able to induce target cell apoptosis by activating caspase independent pathways. Granzyme B is induced in CD8 <sup>+</sup> T lymphocytes with ConA/ IL-2 and CD4 <sup>+</sup> T lymphocytes with anti CD3/CD28 or CD3/CD46.
<b>Interaction</b>	Caspase-3
<b>Ligand/Receptor</b>	Mannose-6-phosphate receptor
<b>Cell Type</b>	T cells, NK cells, Neutrophils
<b>Biology Area</b>	Cell Biology, Immunology, Innate Immunity, Neuroscience
<b>Molecular Family</b>	Proteases, Enzymes and Regulators
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Estebanez-Perpina E, <i>et al.</i> 2000. <i>Biol Chem.</i> 381:1203.</li> <li>2. Griffiths GM. And S. Isaza, <i>et al.</i> 1993. <i>J. Cell Biol.</i> 120:885.</li> <li>3. Spaeny-Dekking EH, <i>et al.</i> 1998. <i>J. Immunol.</i> 160:3610.</li> <li>4. Wagner C, <i>et al.</i> 2008. <i>Mol. Immunol.</i> 45:1761.</li> </ol>
<b>Gene ID</b>	<a href="#">3002</a> <a href="#">14939</a>

## Related Protocols

---

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

[Intracellular Flow Cytometry Staining Protocol](#)

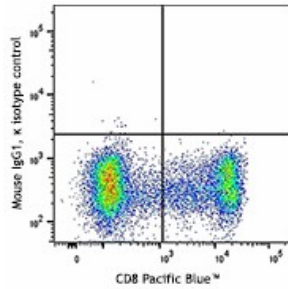
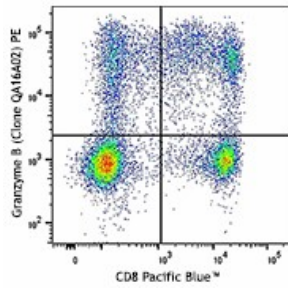
## Other Formats

---

Purified anti-human/mouse Granzyme B Recombinant Antibody, APC anti-human/mouse Granzyme B Recombinant Antibody, FITC anti-human/mouse Granzyme B Recombinant Antibody, PE anti-human/mouse Granzyme B Recombinant Antibody, PE/Cyanine7 anti-human/mouse Granzyme B Recombinant Antibody, Alexa Fluor® 700 anti-human/mouse Granzyme B Recombinant Antibody, Pacific Blue™ anti-human/mouse Granzyme B Recombinant Antibody, PerCP/Cyanine5.5 anti-human/mouse Granzyme B Recombinant Antibody, PE/Dazzle™ 594 anti-human/mouse Granzyme B Recombinant Antibody, Alexa Fluor® 647 anti-human/mouse Granzyme B Recombinant Antibody, APC/Fire™ 750 anti-human/mouse Granzyme B Recombinant Antibody, PE/Cyanine5 anti-human/mouse Granzyme B Recombinant Antibody

## Product Data

---



Human peripheral blood mononuclear cells were stained with CD8 Pacific Blue™, fixed and permeabilized, and then stained with Granzyme B PE (clone QA16A02, top) or mouse IgG1, κ PE isotype control (bottom).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
 Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587