

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

<b>Catalog# / Size</b>	372203 / 25 tests 372204 / 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, $\kappa$
<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 APC 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 $\mu$ l per million cells in 100 $\mu$ l staining volume or 5 $\mu$ l per 100 $\mu$ l of whole blood.
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Product Citations</b>	<ol style="list-style-type: none"> <li>Li X, <i>et al.</i> 2022. Nat Commun. 13:2794. <a href="#">PubMed</a></li> <li>Wurzer H, <i>et al.</i> 2021. Front Immunol. 12:619069. <a href="#">PubMed</a></li> <li>Weisberg SP, <i>et al.</i> 2020. Cell Reports. 29(12):3916-3932.e5.. <a href="#">PubMed</a></li> <li>Wang C, <i>et al.</i> 2021. Cell Rep. 37:110021. <a href="#">PubMed</a></li> <li>Yi M, <i>et al.</i> 2021. J Hematol Oncol. 14:27. <a href="#">PubMed</a></li> <li>Wang Y, <i>et al.</i> 2021. Sci Rep. 1.429861111. <a href="#">PubMed</a></li> <li>Wu Y, <i>et al.</i> 2021. Nat Commun. 12:2346. <a href="#">PubMed</a></li> <li>Hu Q, <i>et al.</i> 2018. Nat Biomed Eng. 0.660416667. <a href="#">PubMed</a></li> <li>Gong Y, <i>et al.</i> 2020. Cell Metabolism. 33(1):51-64.e9. <a href="#">PubMed</a></li> <li>Cooper GE, <i>et al.</i> 2018. Front Immunol. 9:1671. <a href="#">PubMed</a></li> <li>Liu W, <i>et al.</i> 2021. Cell Death Discov. 7:136. <a href="#">PubMed</a></li> <li>Zhu Y, <i>et al.</i> 2019. Cell Stem Cell. 25:542. <a href="#">PubMed</a></li> <li>Pathania AS, <i>et al.</i> 2022. Mol Ther Oncolytics. 25:308. <a href="#">PubMed</a></li> <li>Li YR, <i>et al.</i> 2021. Cell Rep Med. 2:100449. <a href="#">PubMed</a></li> <li>Xu Q, <i>et al.</i> 2021. Theranostics. 11:1937. <a href="#">PubMed</a></li> <li>Wei Z, <i>et al.</i> 2021. Nat Commun. 0.805555556. <a href="#">PubMed</a></li> <li>Koelwyn GJ, <i>et al.</i> 2020. Nat Med. 1452:26. <a href="#">PubMed</a></li> <li>Matsumura T, <i>et al.</i> 2022. Nat Commun. 13:7064. <a href="#">PubMed</a></li> <li>Ng KW, <i>et al.</i> 2019. eLife. 0.3333333333333333. <a href="#">PubMed</a></li> <li>Sade-Feldman M, <i>et al.</i> 2018. Cell. 175:998. <a href="#">PubMed</a></li> </ol>

21. Lu Y, *et al.* 2018. *Cancer Cell*. 33:1048. [PubMed](#)
22. Wang Y, *et al.* 2021. *Cell Reports*. 36(6):109516. [PubMed](#)
23. Chen YP, *et al.* 2020. *Cell Res*. 30:1024. [PubMed](#)
24. Zhang B, *et al.* 2021. *Nature*. 599:471. [PubMed](#)
25. Strait AA, *et al.* 2021. *Commun Biol*. 4:1005. [PubMed](#)

**RRID** AB\_2687027 (BioLegend Cat. No. 372203)  
 AB\_2687028 (BioLegend Cat. No. 372204)

## Antigen Details

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<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. Isaaz, <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

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

[Intracellular Flow Cytometry Staining Protocol](#)

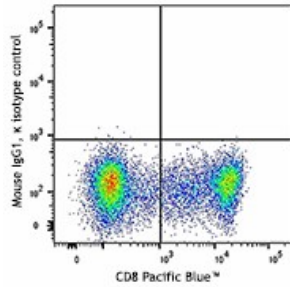
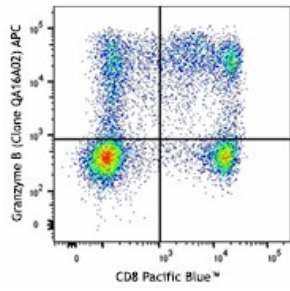
## Other Formats

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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

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

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