

PE anti-human Granzyme A Antibody

Catalog# / Size	507206 / 100 tests
Clone	CB9
Regulatory Status	RUO
Other Names	Granzyme 1, Hanukah factor serine protease (HFSP), Cytotoxic T-lymphocyte-associated serine esterase 3 (CTLA-3)
Isotype	Mouse IgG1, κ
Description	Granzyme A is a 28 kD disulfide-linked homodimeric protein and the most abundant of the proteases occurring in CTL granules. It is homologous to other serine esterases, including other granzymes, mast cell proteases, and neutrophil cathepsins. Granzyme B is thought to be a rapidly-acting apoptotic enzyme, while Granzyme A is slow acting. The CB9 monoclonal antibody recognizes human Granzyme A and has been shown to be useful for flow cytometry, immunoprecipitation, and immunohistochemistry (paraffin-embedded sections).

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Purified human Granzyme A
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 PE 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 μ l per million cells in 100 μ l staining volume or 5 μ l per 100 μ l of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemical staining ³ of formalin-fixed paraffin-embedded tissue sections, and immunoprecipitation ² .
Application References (PubMed link indicates BioLegend citation)	<ol style="list-style-type: none"> 1. Trimble L, <i>et al.</i> 1998. <i>Blood</i> 91:585. 2. Beresford P, <i>et al.</i> 1997. <i>P. Natl. Acad. Sci. USA</i> 94:9285. 3. Raqib R, <i>et al.</i> 2002. <i>Infect. Immun.</i> 70:3199. 4. Chen H, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:591.
Product Citations	<ol style="list-style-type: none"> 1. Ramaswamy A, <i>et al.</i> 2021. <i>Immunity.</i> 54(5):1083-1095.e7. PubMed 2. Shokri MR, <i>et al.</i> 2019. <i>Sci Rep.</i> 9:10007. PubMed 3. Lamichhane R <i>et al.</i> 2019. <i>Cell Rep.</i> 28(12):3061-3076 . PubMed
RRID	AB_315472 (BioLegend Cat. No. 507206)

Antigen Details

Structure	Serine protease; disulfide-linked homodimer; 28 kD (Mammalian)
Bioactivity	Induction of caspase-independent cell death by apoptosis; release of NM23-H1 for single-strand DNA nicking
Cell Sources	Cytotoxic T cells, NK cells
Cell Targets	Intracellular targets lamins A, B cells, C, nucleosome assembly protein (NAP) SET cells, HMG2, Ape1/Ref-1, histones; cleaves SET:NM23-H1 complex to release NM23-H1
Receptors	Assisted by perforin
Cell Type	Tregs
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroscience
Molecular Family	Enzymes and Regulators, Proteases
Antigen References	1. Brune J, <i>et al.</i> 1986. <i>Nature</i> 322:268. 2. Fan Z, <i>et al.</i> 2003. <i>Nature Immunol.</i> 4:145. 3. Fan Z, <i>et al.</i> 2003. <i>Cell</i> 112:659. 4. Masson D, <i>et al.</i> 1987. <i>Cell</i> 49:679.
Gene ID	3001

Related Protocols

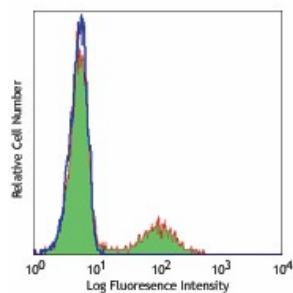
[Intracellular Cytokine Staining Protocol - Video](#)

[Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

FITC anti-human Granzyme A, PE anti-human Granzyme A, Purified anti-human Granzyme A, Pacific Blue™ anti-human Granzyme A, Alexa Fluor® 700 anti-human Granzyme A, Alexa Fluor® 488 anti-human Granzyme A, Alexa Fluor® 647 anti-human Granzyme A, PerCP/Cyanine5.5 anti-human Granzyme A, Alexa Fluor® 594 anti-human Granzyme A, APC anti-human Granzyme A, PE/Cyanine7 anti-human Granzyme A

Product Data



Human peripheral blood lymphocytes
intracellular stained with CB9 PE

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). 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
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587

