

Purified anti-human Granzyme A Antibody

Catalog# / Size	507202 / 100 µg
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.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	ICFC - Quality tested ICC, IP, IHC-P - Reported in the literature, not verified in house
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 ≤ 0.5 µg per million cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
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	<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. Carreno B, <i>et al.</i> 2012. <i>J Immunol.</i> 188:5839. PubMed
RRID	AB_315468 (BioLegend Cat. No. 507202)

Antigen Details

Structure	Serine protease; disulfide-linked homodimer; 28 kD (Mammalian)
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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	<ol style="list-style-type: none"> 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

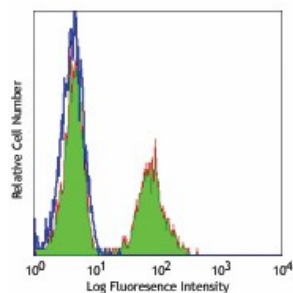
[Intracellular Cytokine Staining Protocol - Video](#)

[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 intracellularly stained with purified CB9, followed by anti-mouse IgG FITC

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