

# Granzyme B Monoclonal Antibody (NGZB), PE-Cyanine7, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Published Species	Mouse
Host/Isotype	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), PE-Cyanine7, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	NGZB
Conjugate	PE-Cyanine7
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_10853339

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.125 µg/test	27 Publications

## Product Specific Information

Description: This NGZB monoclonal antibody reacts with mouse Granzyme B, which is a member of the granzyme serine protease family. Granzyme B is found in the granules of cytotoxic T cells and NK cells. Granzyme B has also been described as CGL1 (cathepsin G-like-1), a serine protease expressed only in cytotoxic T-lymphocytes after cell activation, and CTLA-1 (cytotoxic T lymphocyte-associated serine esterase 1) based on identification of mRNA in various cytotoxic T cells, but not observed in non-cytotoxic lymphoid cells. Granzyme B is crucial for the rapid induction of target cell death by apoptosis, induced by interaction with cytotoxic T cells. The receptor involved has been identified as mannose 6-phosphate receptor. This receptor functions as a death receptor for Granzyme B during cytotoxic T cell-induced apoptosis. This NGZB monoclonal antibody does not crossreact to human Granzyme B nor is staining blocked with GB11, suggesting it recognizes a different epitope.

Applications Reported: This NGZB antibody has been reported for use in intracellular staining and flow cytometric analysis.

Applications Tested: This NGZB antibody has been tested by intracellular staining and flow cytometric analysis of mouse splenocytes using the Intracellular Fixation & Permeabilization Buffer Set (cat. 88-8824) and protocol. Please refer to Best Protocols: Protocol A: Two step protocol for (cytoplasmic) intracellular proteins. This can be used at less than or equal to 0.125 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

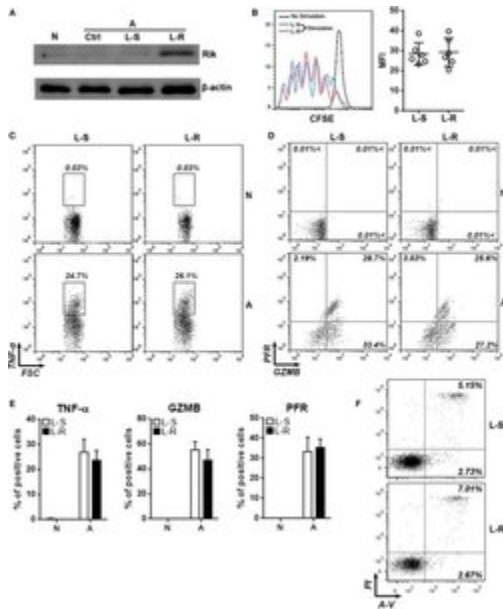
Light sensitivity: This tandem dye is sensitive photo-induced oxidation. Please protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100  $\mu$ L cell sample + 100  $\mu$ L IC Fixation Buffer) or 1-step Fix /Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency /compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

Excitation: 488-561 nm; Emission: 775 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2  $\mu$ m post-manufacturing filtered.

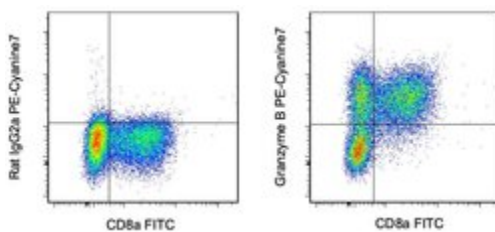
## Advanced Verification Data



### Granzyme B Antibody (25-8898-82)

Figure 3 Overexpression of Rik does not influence CD8 + T cell activation in vitro . (A) Expression of Rik after lentiviral transduction. N: naive CD8 + T cells. A: agonistic antibody-stimulated CD8 + T cells. Ctrl: no transduction. L-S: transduction with lentiviruses containing scramble sequence. L-R: transduction with lentiviruses containing Rik sequence. This is a representative image of two independent experiments. (B) CFSE dilution in lentivirus-transduced CD8 + T cells. Left panel: representative histograms. Right panel: statistics of mean fluorescent intensity. (C,D) Intracellular staining of TNF-alpha (C) , granzyme B and perforin (D) in lentivirus-transduced CD8 + T cells. Numbers in the plots are proportions of gated cell populations. N: naive CD8 + T cells. A: agonistic antibody-stimulated CD8 + T cells. L-S: transduction with lentiviruses containing scramble sequence. L-R: transduction with lentiviruses containing Rik sequence. (E) Statistical analysis of the proportions of CD8 + T cells expressing TNF-alpha, granzyme B, and perforin. N = 5 per group. (F) CD8 + T cell apoptosis after stimulation and lentiviral transduction. A-V, Annexin V; PI, propidium iodide. This is a representative image of two independent experiments. Cell treatment validation info.

## Product Images For Granzyme B Monoclonal Antibody (NGZB), PE-Cyanine7, eBioscience™



### Granzyme B Antibody (25-8898-82) in Flow

C57BL/6 mouse splenocytes were stimulated for 72 hours with CD3e and CD28 Monoclonal Antibodies, Functional Grade (Product # 16-0031-85) and (Product # 16-0281-85), followed by Protein Transport Inhibitor Cocktail (Product # 00-4980-03), for an additional 5 hours. Cells were then surface stained with CD8a Monoclonal Antibody, FITC (Product # 11-0081-82) followed by intracellular staining of 0.06  $\mu$ g of Rat IgG2a kappa Isotype Control, PE-Cyanine7 (Product # 25-4321-82) (left) or 0.06  $\mu$ g of Granzyme B Monoclonal Antibody, PE-Cyanine7 (right), using the Intracellular Fixation & Permeabilization Buffer Set (Product # 88-8824-00) and protocol. Cells in the lymphocyte gate were used for analysis.

View more figures on [thermofisher.com](https://thermofisher.com)

## Flow Cytometry (27)

iScience

### Non-redundant activity of GSK-3 and GSK-3 in T cell-mediated tumor rejection.

"25-8898-82 was used in Flow Cytometry to demonstrate that both isoforms contribute to T cell function to different degrees."

Authors: Steele L, Mannion AJ, Shaw G, MacLennan KA, Cook GP, Rudd CE, Taylor A

**Species**  
Mouse

**Dilution**  
1:100

**Year**  
2021

International journal of nanomedicine

### Extracellular Vesicles from *Akkermansia muciniphila* Elicit Antitumor Immunity Against Prostate Cancer via Modulation of CD8<sup>+</sup> T Cells and Macrophages.

"Published figure using Granzyme B monoclonal antibody (Product # 25-8898-82) in Flow Cytometry"

Authors: Luo ZW, Xia K, Liu YW, Liu JH, Rao SS, Hu XK, Chen CY, Xu R, Wang ZX, Xie H

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2021

[View more Flow references on thermofisher.com](#)

## More applications with references on thermofisher.com

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.