

Datasheet: MCA2120

Description:	MOUSE ANTI GRANZYME B
Specificity:	GRANZYME B
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	GB11
Isotype:	IgG1
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	▪			1/10 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA	▪			2ug/ml - 5ug/ml
Immunoprecipitation	▪			
Western Blotting			▪	
Immunofluorescence	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1) Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code [BUF09](#)) for this purpose.

Target Species	Human
Species Cross Reactivity	Reacts with: Chimpanzee, Monkey, Rhesus Monkey N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture

supernatant

Buffer Solution Tris buffered saline

Preservative Stabilisers 0.09% Sodium azide

Approx. Protein Concentrations IgG concentration 1.0 mg/ml

Immunogen Purified human Granzyme B.

External Database Links

UniProt:

[P10144](#) [Related reagents](#)

Entrez Gene:

[3002](#) GZMB [Related reagents](#)

Synonyms CGL1, CSPB, CTLA1, GRB

RRID AB_2114582

Fusion Partners Spleen cells from immunised Balb/c mice were fused with cells of the mouse SP2/0 myeloma cell line.

Specificity **Mouse anti Granzyme B antibody, clone GB11** recognizes the serine protease Granzyme B, important in the induction of apoptosis in target cells by cytolytic lymphocytes (CTLs).

Granzyme B plays a key role in the induction of apoptosis by CTLs. After delivery to the target cell, Granzyme B activates the cascade of caspases that finally results in cell death.

Mouse anti Granzyme B antibody, clone GB11 is suitable for the detection of Granzyme B expressing cells by flow cytometry. In normal peripheral blood approximately 20% of CD8+ve T cells have been found to express Granzyme B.

Flow Cytometry Use 10ul of the suggested working dilution to label 10^6 cells or 100ul whole blood.

ELISA This antibody has been reported to function as a capture reagent in sandwich ELISA assays for soluble Granzyme B in conjunction with biotin conjugated [GB10](#) as detection reagent.

References

1. Spaeny-Dekking, E.H. *et al.* (1998) Extracellular granzymes A and B in humans: detection of native species during CTL responses *in vitro* and *in vivo*. [J Immunol. 160 \(7\): 3610-6.](#)
2. Tschopp, C.M. (2006) Granzyme B, a novel mediator of allergic inflammation: its induction and release in blood basophils and human asthma. [Blood.108:2290-9.](#)
3. Wever, D. C. *et al.* (1998) The CD8+ Granzyme B+ T cell subset in peripheral blood

- from healthy individuals contains activated and apoptosis-prone cells. [Immunol. 93: 383](#)
4. Hsi, B.L. & Yeh, C.J. (1986) Monoclonal antibodies to human amnion. [J Reprod Immunol. 9 \(1\): 11-21.](#)
 5. Mahrus, S. & Craik, C.S. (2005) Selective chemical functional probes of granzymes A and B reveal granzyme B is a major effector of natural killer cell-mediated lysis of target cells. [Chem Biol. 12: 567-77.](#)
 6. Davis, C.C. *et al.* (2010) Interleukin-7 permits Th1/Tc1 maturation and promotes ex vivo expansion of cord blood T cells: a critical step toward adoptive immunotherapy after cord blood transplantation. [Cancer Res. 70: 5249-58.](#)
 7. Hallermalm, K. *et al.* (2008) Modulation of the tumor cell phenotype by IFN-gamma results in resistance of uveal melanoma cells to granule-mediated lysis by cytotoxic lymphocytes. [J Immunol. 180: 3766-74.](#)
 8. Hufner, K. *et al.* (2009) Fewer latent herpes simplex virus type 1 and cytotoxic T cells occur in the ophthalmic division than in the maxillary and mandibular divisions of the human trigeminal ganglion and nerve. [J Virol. 83: 3696-703.](#)
 9. Kumar, D. *et al.* (2009) JNK MAPK pathway regulates constitutive transcription of CCL5 by human NK cells through SP1. [J Immunol. 182: 1011-20.](#)
 10. Clayton, A. *et al.* (2008) Human tumor-derived exosomes down-modulate NKG2D expression. [J Immunol. 180: 7249-58.](#)
 11. Schleypen, J.S. *et al.* (2006) Cytotoxic markers and frequency predict functional capacity of natural killer cells infiltrating renal cell carcinoma. [Clin Cancer Res. 12: 718-25.](#)
 12. Hodge, S. *et al.* (2015) Increased CD8 T-cell granzyme B in COPD is suppressed by treatment with low-dose azithromycin. [Respirology. 20 \(1\): 95-100.](#)
 13. Kumagai-Takei, N. *et al.* (2016) The Suppressed Induction of Human Mature Cytotoxic T Lymphocytes Caused by Asbestos Is Not due to Interleukin-2 Insufficiency. [J Immunol Res. 2016: 7484872.](#)

Storage	Store at +4°C or at -20°C if preferred.
	This product should be stored undiluted.
	Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee	12 months from date of despatch
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Health And Safety Information	Material Safety Datasheet documentation #10057 available at: 10057: https://www.bio-rad-antibodies.com/uploads/MSDS/10057.pdf
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Regulatory	For research purposes only
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Related Products

Recommended Secondary Antibodies

- Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
 Goat Anti Mouse IgG (STAR77...) [HRP](#)

Rabbit Anti Mouse IgG (STAR12...)	RPE
Rabbit Anti Mouse IgG (STAR8...)	DyLight@800
Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (STAR70...)	FITC
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight@488 , DyLight@680 , DyLight@800 , FITC , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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