

Datasheet: MCA2120 BATCH NUMBER 163522

Description:	scription: MOUSE ANTI GRANZYME B		
Specificity:	GRANZYME B		
Format:	Purified		
Product Type:	Monoclonal Antibody		
Clone:	GB11		
Isotype:	lgG1		
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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	<b>Not Determined</b>	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 permeabilization is required for this application. The use of Leucoperm (Product Code <u>BUF09</u>) is recommended 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 <sup>6</sup> 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 <u>GB10</u> as detection reagent.
References	<ol> <li>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.</li> <li>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.</li> </ol>

- 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. <u>Immunol. 93: 383</u> 4. Hsi, B.L. & Yeh, C.J. (1986) Monoclonal antibodies to human amnion. <u>J Reprod Immunol. 9 (1): 11-21.</u>
- 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. <u>Chem Biol. 12: 567-77.</u>
- 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. <u>J Immunol</u>. 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. <u>J Immunol</u> Res. 2016: 7484872.
- 14. Kumagai-Takei, N. *et al.* (2021) Effect of IL-15 addition on asbestos-induced suppression of human cytotoxic T lymphocyte induction. <u>Environ Health Prev Med. 26 (1):</u> 50.
- 15. Jimenez, O. *et al.* (2019) M1-like macrophage polarization prevails in young children with classic Hodgkin Lymphoma from Argentina. <u>Sci Rep. 9 (1): 12687.</u>

#### **Storage**

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10057 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2120">https://www.bio-rad-antibodies.com/SDS/MCA2120</a> 10057
Regulatory	For research purposes only

### Related Products

# **Recommended Secondary Antibodies**

Rabbit Anti Mouse IgG (STAR12...) RPE

Goat Anti Mouse IgG IgA IgM (STAR87...) HRP

Goat Anti Mouse IgG (STAR76...) RPE

Goat Anti Mouse IgG (STAR70...) FITC

Rabbit Anti Mouse IgG (STAR13...) HRP

Goat Anti Mouse IgG (Fc) (STAR120...) FITC, HRP

Rabbit Anti Mouse IgG (STAR9...) <u>FITC</u>
Goat Anti Mouse IgG (STAR77...) HRP

Goat Anti Mouse IgG (H/L) (STAR117...) Alk. Phos., DyLight®488, DyLight®550,

DyLight®650, DyLight®680, DyLight®800,

FITC, HRP

# **Recommended Negative Controls**

### MOUSE IgG1 NEGATIVE CONTROL (MCA928)

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M404045:220820'

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