

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.
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
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, which is 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. <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (2009) JNK MAPK pathway regulates constitutive transcription of CCL5 by human NK cells through SP1. J Immunol. 182: 1011-20. 10. Clayton, A. <i>et al.</i> (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.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10057 available at: 10057: https://www.bio-rad-antibodies.com/uploads/MSDS/10057.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR70...)	FITC
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®549 , DyLight®649 , DyLight®680 , DyLight®800 , FITC , HRP

Recommended Negative Controls

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

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