

Datasheet: MCA2540A488

Description:	MOUSE ANTI HUMAN PI-9:Alexa Fluor® 488
Specificity:	PI-9
Other names:	SERPINB9
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	7D8
Isotype:	IgG1
Quantity:	100 TESTS/1ml

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)	▪			Neat - 1/5

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 [BUF09](#)) is recommended for this purpose.

Target Species	Human		
Species Cross Reactivity	Does not react with:Pig, Mouse		
Product Form	Purified IgG conjugated to Alexa Fluor® 488		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	Alexa Fluor®488	495	519
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		

Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.05mg/ml
Immunogen	Recombinant PI-9 produced in <i>P. pastoris</i> .
External Database Links	<p>UniProt: P50453 Related reagents</p> <p>Entrez Gene: 5272 SERPINB9 Related reagents</p>
Synonyms	PI9
RRID	AB_2186598
Fusion Partners	Spleen cells from immunized Balb/c mice were fused with cells of the mouse NS-1 myeloma cell line.
Specificity	<p>Mouse anti Human PI-9 antibody, clone 7D8 recognizes human PI-9 (proteinase inhibitor 9), also known as SerpinB9, a ~42kDa intracellular nucleocytoplasmic serpin expressed in cytotoxic lymphocytes (CTLs), natural killer (NK) cells, monocyte-derived dendritic cells (DCs), and to a lesser extent in B cells and myeloid cells.</p> <p>Granzyme B (grB) is a serine protease highly expressed by CTLs and NK cells, which is endocytosed by virus-infected and malignant target cells. The subsequent release of grB from the endocytic vesicles into the cytoplasm of the target cells, triggers grB-mediated apoptosis, through cleavage of various cytoplasmic or nuclear proteins. PI-9, up-regulated in response to grB production and degranulation, has been identified as a potent inhibitor of Granzyme B-mediated apoptosis, providing a vital self-protection mechanism against the premature apoptosis of CTLs and NK cells by grB, which may escape into the cytoplasm of the effector cells themselves.</p> <p>Clone 7D8 has been reported to work in western blotting applications. Bio-Rad recommend the use of MCA2540GA for this purpose. Clone 7D8 is suitable for use in indirect Immunofluorescence (Hirst <i>et al.</i> 2003).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> Buzza, M.S. <i>et al.</i> (2001) The granzyme B inhibitor, PI-9, is present in endothelial and mesothelial cells, suggesting that it protects bystander cells during immune responses. Cell Immunol. 210: 21-9. Hirst, C.E. <i>et al.</i> (2003) The intracellular granzyme B inhibitor, proteinase inhibitor 9, is up-regulated during accessory cell maturation and effector cell degranulation, and its overexpression enhances CTL potency. J Immunol. 170 (2): 805-15.

3. Heutinck, K.M. *et al.* (2012) SerpinB9 expression in human renal tubular epithelial cells is induced by triggering of the viral dsRNA sensors TLR3, MDA5 and RIG-I [Nephrol Dial Transplant. 27: 2746-54.](#)
4. Pohjanen VM *et al.* (2013) Decreased expression of protease inhibitor 9, a granzyme B inhibitor, in celiac disease: a potential mechanism in enterocyte destruction and villous atrophy. [Int J Immunopathol Pharmacol. 26 \(4\): 897-905.](#)

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. This product is photosensitive and should be protected from light.

Guarantee 12 months from date of despatch

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Health And Safety Information Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2540A488>
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Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 488 \(MCA928A488\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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