

Datasheet: MCA2540A488

**BATCH NUMBER 164289**

<b>Description:</b>	MOUSE ANTI HUMAN PI-9:Alexa Fluor® 488
<b>Specificity:</b>	PI-9
<b>Other names:</b>	SERPINB9
<b>Format:</b>	ALEXA FLUOR® 488
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	7D8
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://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.**

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

<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.05mg/ml
<b>Immunogen</b>	Recombinant PI-9 produced in <i>P. pastoris</i> .
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P50453</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">5272</a>    SERPINB9    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	PI9
<b>RRID</b>	AB_2186598
<b>Fusion Partners</b>	Spleen cells from immunized Balb/c mice were fused with cells of the mouse NS-1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human PI-9 antibody, clone 7D8</b> 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 (<a href="#">Hirst <i>et al.</i> 2003</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>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. <a href="#">Cell Immunol. 210: 21-9.</a></li> <li>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. <a href="#">J Immunol. 170 (2): 805-15.</a></li> </ol>

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.](#)

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**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.

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**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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