

## Datasheet: MCA1438

**BATCH NUMBER 158833**

<b>Description:</b>	MOUSE ANTI HUMAN MAST CELL TRYPTASE
<b>Specificity:</b>	MAST CELL TRYPTASE
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AA1
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.2 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (1)	▪			1/10,000
ELISA	▪			
Immunoprecipitation			▪	
Western Blotting	▪			
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

**(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**

### Target Species

Human

### Species Cross Reactivity

Reacts with: Dog, Monkey, Cat, Rat

**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

<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Human mast cell tryptase purified from human lung tissue.
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">P20231</a>      <a href="#">Related reagents</a></p> <p><a href="#">Q15661</a>      <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">64499</a>    TPSB2    <a href="#">Related reagents</a></p> <p><a href="#">7177</a>      TPSAB1   <a href="#">Related reagents</a></p>
<b>Synonyms</b>	TPS1, TPS2, TPSB1
<b>RRID</b>	AB_322318
<b>Fusion Partners</b>	Spleen cells from immunised Balb/c mice were fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human mast cell tryptase, clone AA1</b> recognizes human mast cell tryptase, both <a href="#">alpha and beta</a> isoforms. Mouse anti Mast cell tryptase, clone AA1 is an excellent marker for mast cells, and does not bind to any other cell type in immunohistology (<a href="#">Walls et al. 1990</a>).</p> <p>Tryptases are the products of a number of <a href="#">genes</a> and form the major neutral protease present in mast cells secreted in response to infection and injury. Mast cell tryptase has an important role in the pathology of inflammatory diseases, especially asthma through bronchoconstriction (<a href="#">Zhang and Timmerman 1997</a>).</p>
<b>Histology Positive Control Tissue</b>	Tonsil
<b>References</b>	<ol style="list-style-type: none"> <li>1. Walls, A.F. <i>et al.</i> (1990) Immunohistochemical identification of mast cells in formaldehyde-fixed tissue using monoclonal antibodies specific for tryptase. <a href="#">J Pathol. 162 (2): 119-26.</a></li> <li>2. Ozaki, K. <i>et al.</i> (2002) Mast cell tumors of the gastrointestinal tract in 39 dogs. <a href="#">Vet Pathol. 39 (5): 557-64.</a></li> </ol>

3. Jacob, C. *et al.* (2005) Mast cell tryptase controls paracellular permeability of the intestine. Role of protease-activated receptor 2 and beta-arrestins. [J Biol Chem. 280: 31936-48.](#)
4. Louisset, E. *et al.* (2008) Ectopic expression of serotonin7 receptors in an adrenocortical carcinoma co-secreting renin and cortisol. [Endocr Relat Cancer.15: 1025-34.](#)
5. Xiang, M. *et al.* (2011) Usefulness of serum tryptase level as an independent biomarker for coronary plaque instability in a Chinese population. [Atherosclerosis. 215 \(2\): 494-9.](#)
6. Thienemann, F. *et al.* (2004) Regulation of mast cell characteristics by cytokines: divergent effects of interleukin-4 on immature mast cell lines versus mature human skin mast cells. [Arch Dermatol Res. 296: 134-8.](#)
7. Mauro, L.V. *et al.* (2008) Association between mast cells of different phenotypes and angiogenesis in colorectal cancer. [Mol Med Report. 1: 895-902.](#)
8. Liu, J. *et al.* (2009) Genetic deficiency and pharmacological stabilization of mast cells reduce diet-induced obesity and diabetes in mice. [Nat Med. 15: 940-5.](#)
9. Asano-Kato, N. *et al.* (2005) Tryptase increases proliferative activity of human conjunctival fibroblasts through protease-activated receptor-2. [Invest Ophthalmol Vis Sci. 46: 4622-6.](#)
10. Facchetti, A. *et al.* (2006) Histochemical study of cardiac mast cells degranulation and collagen deposition: interaction with the catecholaminergic system in the rat. [Eur J Histochem. 50: 133-40.](#)
11. Dichlberger, A. *et al.* (2011) Lipid body formation during maturation of human mast cells. [J Lipid Res. 52: 2198-208.](#)
12. Kawarai, S. *et al.* (2010) Cultivation and characterization of canine skin-derived mast cells. [J Vet Med Sci. 72 \(2\): 131-40.](#)
13. Kazama, I. *et al.* (2015) Mast cell involvement in the progression of peritoneal fibrosis in rats with chronic renal failure. [Nephrology \(Carlton\). 20 \(9\): 609-16.](#)
14. Kato, Y. *et al.* (2016) Cutaneous mastocytosis with a mutation in the juxtamembrane domain of c-kit in a young laboratory beagle dog. [J Toxicol Pathol. 29 \(1\): 49-52.](#)
15. Luo, J. *et al.* (2016) An indispensable role of CPT-1a to survive cancer cells during energy stress through rewiring cancer metabolism. [Tumour Biol. Oct 13 \[Epub ahead of print\].](#)
16. Perbellini, O. *et al.* (2011) Primary role of multiparametric flow cytometry in the diagnostic work-up of indolent clonal mast cell disorders. [Cytometry B Clin Cytom. 80 \(6\): 362-8.](#)
17. Baba, A. *et al.* (2017) Less contribution of mast cells to the progression of renal fibrosis in Rat kidneys with chronic renal failure. [Nephrology \(Carlton\). 22 \(2\): 159-67.](#)

---

**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 #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1438>

**Regulatory**

For research purposes only

**Related Products****Recommended Secondary Antibodies**

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>

**North & South** Tel: +1 800 265 7376**America** Fax: +1 919 878 3751Email: [antibody\\_sales\\_us@bio-rad.com](mailto: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](mailto: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](mailto:antibody_sales_de@bio-rad.com)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)

'M383050:210513'

**Printed on 18 Jan 2024**