

Datasheet: MCA1438T

Description:	MOUSE ANTI HUMAN MAST CELL TRYPTASE
Specificity:	MAST CELL TRYPTASE
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AA1
Isotype:	IgG1
Quantity:	20 µg

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			■	
Immunohistology - Frozen	■			
Immunohistology - Paraffin (1)	■			1/10,000
ELISA	■			
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.
Product Form	Purified IgG - liquid
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
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml

Immunogen	Human mast cell tryptase purified from human lung tissue.
External Database Links	UniProt: P20231 Related reagents Q15661 Related reagents Entrez Gene: 64499 TPSB2 Related reagents 7177 TPSAB1 Related reagents
Synonyms	TPS1, TPS2, TPSB1
Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the mouse NS1 myeloma cell line.
Specificity	Mouse anti Human Mast Cell Tryptase, clone AA1 recognizes human mast cell tryptase, both alpha and beta isoforms. Mouse anti Mast cel tryptase, clone AA1 is an excellent marker for mast cells, and does not bind to any other cell type in immunohistology (Walls <i>et al.</i> 1990). Tryptases are the products of a number of genes 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 (Zhang and Timmerman 1997).
Histology Positive Control Tissue	Tonsil
References	1. Walls, A.F. <i>et al.</i> (1990) Immunohistochemical identification of mast cells in formaldehyde-fixed tissue using monoclonal antibodies specific for tryptase. J Pathol. 162 (2): 119-26. 2. Ozaki, K. <i>et al.</i> (2002) Mast cell tumors of the gastrointestinal tract in 39 dogs. Vet Pathol. 39 (5): 557-64. 3. Jacob, C. <i>et al.</i> (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. Louiset, E. <i>et al.</i> (2008) Ectopic expression of serotonin7 receptors in an adrenocortical carcinoma co-secreting renin and cortisol. Endocr Relat Cancer.15: 1025-34. 5. Xiang, M. <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (2008) Association between mast cells of different phenotypes and angiogenesis in colorectal cancer. Mol Med Report. 1: 895-902. 8. Liu, J. <i>et al.</i> (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. <i>et al.</i> (2005) Tryptase increases proliferative activity of human conjunctival fibroblasts through protease-activated receptor-2. Invest Ophthalmol Vis Sci. 46: 4622-6. 10. Facoetti, A. <i>et al.</i> (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. <i>et al.</i> (2011) Lipid body formation during maturation of human mast cells. J Lipid Res. 52: 2198-208. 12. Kawarai, S. <i>et al.</i> (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. Sevestre, H.P. *et al.* (2015) Mast Cell and Follicular Lymphoma, Association or Relationship. [Abstract 338 -Hematol Oncol. 33 Suppl 1: 263.](#)
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.* (2016) Less Contribution of Mast Cells to the Progression of Renal Fibrosis in Rat Kidneys with Chronic Renal Failure. [Nephrology \(Carlton\). Feb 2. \[Epub ahead of print\]](#)
18. 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.](#)

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 #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.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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Printed on 01 Aug 2018

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