# Datasheet: MCA1438

## BATCH NUMBER 1808

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

| | 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

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| **Preparation** | Purified IgG prepared by affinity chromatography on Protein A 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:**<br>P20231 Related reagents<br>Q15661 Related reagents<br><br>**Entrez Gene:**<br>64499 TPSB2 Related reagents<br>7177 TPSAB1 Related reagents |
| **Synonyms** | TPS1, TPS2, TPSB1 |
| **RRID** | AB_322318 |
| **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 cell tryptase, clone AA1 is an excellent marker for mast cells, and does not bind to any other cell type in immunohistology (Walls *et al.* 1990).<br><br>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. *et al.* (1990) Immunohistochemical identification of mast cells in formaldehyde-fixed tissue using monoclonal antibodies specific for tryptase. J Pathol. 162 (2): 119-26.<br>2. Ozaki, K. *et al.* (2002) Mast cell tumors of the gastrointestinal tract in 39 dogs. Vet Pathol. 39 (5): 557-64. |

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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.
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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. Facoetti, A. *et al.* (2006) Histochemical study of cardiac mast cells degranulation and collagen deposition: interaction with the cathecolaminergic 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.
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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.

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| **Storage** | Store at +4°C or at -20°C if preferred.<br><br>This product should be stored undiluted.<br><br>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. |
| **Guarantee** | 12 months from date of despatch |
| **Health And Safety** | Material Safety Datasheet documentation #10040 available at: |

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| **Information** | https://www.bio-rad-antibodies.com/SDS/MCA1438<br>10040 |
| **Regulatory** | For research purposes only |

## Related Products

### Recommended Secondary Antibodies

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


**North & South America** Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: 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

**Europe** Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com


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