

Datasheet: MCA5788PE

Description:	RAT ANTI MOUSE TIM-1:RPE
Specificity:	TIM-1
Other names:	T-CELL IMMUNOGLOBULIN MUCIN 1
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	RMT1-10
Isotype:	IgG2a
Quantity:	100 TESTS

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	■			Neat

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

Target Species	Mouse								
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized								
Reconstitution	Reconstitute with 1.0 ml distilled water Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution.								
Max Ex/Em	<table><tr><th>Fluorophore</th><th>Excitation Max (nm)</th><th>Emission Max (nm)</th></tr><tr><td>RPE 488nm laser</td><td>496</td><td>578</td></tr></table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE 488nm laser	496	578		
Fluorophore	Excitation Max (nm)	Emission Max (nm)							
RPE 488nm laser	496	578							
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant								
Buffer Solution	Phosphate buffered saline								
Preservative	0.09% Sodium Azide (NaN ₃)								
Stabilisers	1% Bovine Serum Albumin 5% Sucrose								
Immunogen	Full-length mouse Tim-1-Ig, containing both the IgV and mucin domains of Tim-1.								
External Database Links	UniProt:								

Entrez Gene:

[171283](#) Havcr1 [Related reagents](#)

Synonyms Kim1, Tim1, Timd1

Fusion Partners Lymph node cells from immunised SD rats were fused with cells of the P3U1 myeloma cell line.

Specificity **Rat anti Mouse TIM-1 antibody, clone RMT1-10** recognizes mouse Tim-1 (T-cell immunoglobulin mucin 1), a cell surface glycoprotein and member of the immunoglobulin superfamily, which was first identified as the hepatitis A virus cellular receptor (HAVCR), and is highly expressed in the liver (isoform Tim-1a) and the kidneys (isoform Tim-1b).

Tim-1 is highly expressed by activated CD4+ T cells, and acts as a positive/negative co-stimulatory molecule of T cell proliferation, cytokine production and tolerance abrogation, and is the receptor for Tim-4, expressed on APCs. Tim-1 expression is greater on Th2 than Th1 cells, and studies have shown that interaction between Tim-1 on Th2 cells and Tim-4 on dendritic cells (DCs), enhances Th2 cell function, and have implicated Tim-1 as a critical player in the development of atopic disease, and in particular airway hypersensitivity.

Polymorphic forms of Tim-1 are associated with increased susceptibility to asthma, eczema and Rheumatoid arthritis.

Rat anti Mouse TIM-1 antibody, clone RMT1-10 has been shown to promote Th2 responses, and inhibit antigen-specific T cell proliferation, in contrast to the agonistic function of many Tim-1 antibodies ([Xiao *et al.* 2007](#)).

Rat anti Mouse TIM-1 antibody, clone RMT1-10 has been shown to reduce the severity of EAE (experimental autoimmune encephalomyelitis) and delay disease onset, in mice studies ([Xiao *et al.* 2007](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 1x10⁶ cells in 100ul.

- References**
1. Xiao, S. *et al.* (2007) Differential engagement of Tim-1 during activation can positively or negatively costimulate T cell expansion and effector function. [J Exp Med. 204 \(7\): 1691-702.](#)
 2. Yuan, X. *et al.* (2009) Targeting Tim-1 to overcome resistance to transplantation tolerance mediated by CD8 T17 cells. [Proc Natl Acad Sci U S A. 106 \(26\): 10734-9.](#)
 3. Ueno, T. *et al.* (2008) The emerging role of T cell Ig mucin 1 in alloimmune responses in an experimental mouse transplant model. [J Clin Invest. 118: 742-51.](#)
 4. Fukushima, A. *et al.* (2007) Antibodies to T-cell Ig and mucin domain-containing proteins (Tim)-1 and -3 suppress the induction and progression of murine allergic conjunctivitis. [Biochem Biophys Res Commun. 353: 211-6.](#)
 5. Rong, S. *et al.* (2011) The TIM-1:TIM-4 pathway enhances renal ischemia-reperfusion injury. [J Am Soc Nephrol. 22: 484-95.](#)
 6. Arai, S. *et al.* (2016) Apoptosis inhibitor of macrophage protein enhances intraluminal debris clearance and ameliorates acute kidney injury in mice. [Nat Med. 22 \(2\): 183-93.](#)

Further Reading 1. Freeman, G.J. *et al.* (2010) TIM genes: a family of cell surface phosphatidylserine receptors that regulate innate and adaptive immunity. [Immunol Rev. 235 \(1\): 172-89.](#)

Storage Prior to reconstitution store at +4°C.
After reconstitution store at +4°C.
DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life 12 months from date of reconstitution.

Health And Safety Information Material Safety Datasheet documentation #10075 available at:
10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:RPE \(MCA1212PE\)](#)

Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

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