

Datasheet: MCA5788GA

BATCH NUMBER 168539

Description:	RAT ANTI MOUSE TIM-1
Specificity:	TIM-1
Other names:	CD365, T-CELL IMMUNOGLOBULIN MUCIN 1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	RMT1-10
Isotype:	IgG2a
Quantity:	0.1 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	▪			1/25 - 1/200
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
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. 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 - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide (NaN ₃)

Stabilisers

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1 mg/ml

Immunogen Full-length mouse Tim-1-Ig, containing both the IgV and mucin domains of Tim-1.

External Database Links

UniProt:

[Q5QNS5](#) [Related reagents](#)

Entrez Gene:

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

Synonyms Kim1, Tim1, Timd1

Fusion Partners Lymph node cells from immunized 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 first identified as the hepatitis A virus cellular receptor (HAVCR). TIM-1 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, acting 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, 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.

In humans, polymorphic forms of Tim-1 are associated with increased susceptibility to asthma, eczema and rheumatoid arthritis ([Rodriguez-Manzanet et al. 2009](#)).

Rat anti Mouse TIM-1 antibody, clone RMT1-10 promotes Th2 responses, and inhibits 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 reduces the severity of experimental autoimmune encephalomyelitis and delays disease onset in mice ([Xiao et al. 2007](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

References

1. 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.](#)
2. 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.](#)

3. 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.](#)
4. Rong, S. *et al.* (2011) The TIM-1:TIM-4 pathway enhances renal ischemia-reperfusion injury. [J Am Soc Nephrol. 22: 484-95.](#)
5. 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.](#)
6. Chen, W.Y. *et al.* (2019) Human dendritic cell-specific ICAM-3-grabbing non-integrin downstream signaling alleviates renal fibrosis via Raf-1 activation in systemic candidiasis. [Cell Mol Immunol. 16 \(3\): 288-301.](#)

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 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/MCA5788GA>
10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight@800
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight@550 , DyLight@650 , DyLight@800
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL \(MCA1212\)](#)

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