

Datasheet: MCA5788GA

BATCH NUMBER 154533

Description:	RAT ANTI MOUSE TIM-1
Specificity:	TIM-1
Other names:	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 G 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 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 10⁶ 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

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.

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

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

Recommended Negative Controls

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

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batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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