Datasheet: MCA5788GA

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 Stabilisers	0.09% Sodium Azide (NaN_3)
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 10^6 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 +4ºC or at -20ºC 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

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®649, DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos., Biotin
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP

Recommended Negative Controls

RAT IgG2a NEGATIVE CONTROL (MCA1212)

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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Printed on 01 Aug 2018