

Datasheet: MCA5788F

Description:	RAT ANTI MOUSE TIM-1:FITC
Specificity:	TIM-1
Other names:	CD365, T-CELL IMMUNOGLOBULIN MUCIN 1
Format:	FITC
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	▪			Neat - 1/10

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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid						
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>FITC</td> <td>490</td> <td>525</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	FITC	490	525
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
FITC	490	525					
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 (NaN ₃) 1% Bovine Serum Albumin						
Approx. Protein Concentrations	IgG concentration 0.1 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 1×10^6 cells in 100ul.

The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR ([BUF041A](#) or [BUF041B](#)).

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. This product is photosensitive and should be protected from light.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA5788F>
10041

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:FITC \(MCA1212F\)](#)

Recommended Useful Reagents

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

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

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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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