# RD SYSTEMS a biotechne brand

Monoclonal Mouse IgG<sub>1</sub> Clone # 921832 Catalog Number: MAB2929

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human TIM-4 in direct ELISAs.
Source	Monoclonal Mouse IgG <sub>1</sub> Clone # 921832
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NSO-derived recombinant human TIM-4 Glu25-Leu315 Accession # Q96H15
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

#### APPLICATIONS

Please Note: Optimal dilutions should be	determined by each laboratory for each applicatio	n. General Protocols are available in the Technical Information section on our website.
	Recommended Concentration	Sample
Flow Cytometry	0.25 μg/10 <sup>6</sup> cells	See Below
CyTOF-ready	Ready to be labeled with conjugation.	using established conjugation methods. No BSA or other carrier proteins that could interfere

### DATA

Mu - u - u - u - u - u - u - u -	Detection of TIM-4 in HEK293 Human Cell Line Transfected with Human TIM-4 and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with human TIM-4 and eGFP was stained with and either (A) Mouse Anti-Human TIM-4 Monoclonal Antibody (Catalog # MAB2929) or (B) Mouse IgG <sub>1</sub> Isotype Control (Catalog # MAB02) followed by Phycoerythrin- conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B) View our protocol for Staining Membrane-associated Proteins.
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Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.	
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C	
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.	
	<ul> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> </ul>	
	<ul> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> </ul>	
	<ul> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>	

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## Human TIM-4 Antibody

Monoclonal Mouse IgG<sub>1</sub> Clone # 921832 Catalog Number: MAB2929

### BACKGROUND

TIM-4 (T cell; immunoglobulin; mucin-4), also known as SMUCKLER, is a 60 kDa member of the TIM family of immune regulating proteins. TIMs are type I transmembrane proteins with one Ig-like V domain and one Ser/Thr-rich mucin domain (1 - 3). The human TIM-4 cDNA encodes a 378 amino acid (aa) precursor that includes a 24 aa signal sequence, a 290 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 43 aa cytoplasmic tail (4). Structurally, TIM-4 is distinguished from other TIMs by the presence of an RGD motif in its Ig domain and the lack of a site for tyrosine phosphorylation in its cytoplasmic tail. The mucin domain in TIM-4 is larger than in TIM-1 or TIM-3. Within the ECD, human TIM-4 shares 35% and 23% aa sequence identity with TIM-1 and TIM-3, respectively. A TIM-2 ortholog has not been identified in human. The ECD of human TIM-4 shares 45% aa sequence identity with that of mouse and rat TIM-4. TIM-4 is expressed by macrophages and mature dendritic cells but not by lymphocytes (4, 5). TIM-4 binds specifically to TIM-1 which is also the cellular receptor for the hepatitis A virus, and has been implicated in the development of asthma (5 - 7). Among hematopoietic cells, TIM-1 is expressed on activated B and T cells, preferentially in the Th2 subset of CD4<sup>+</sup> T cells (5, 8). The interaction of TIM-4 wint TIM-1 induces costimulatory and hyperproliferative signals in T cells (5).

#### References:

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- 4. Shakhov, A.N. et al. (2004) Eur. J. Immunol. 34:494.
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- 6. Feigelstock, D. et al. (1998) J. Virol. 72:6621.
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