

# Human TIM-4 Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG<sub>1</sub> Clone # 921832

Catalog Number: FAB2929T

25 Tests

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 NS0-derived recombinant human TIM-4 Glu25-Leu315 Accession # Q96H15		
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm		
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.		
	*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.		

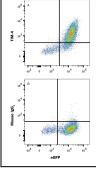
#### **APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Flow Cytometry	5 μL/10 <sup>6</sup> cells	See Below

### DATA

## Flow Cytometry



Detection of TIM-4 in HEK 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 Alexa Fluor® 594-conjugated Monoclonal Antibody (Catalog # FAB2929T) or (B) Mouse IgG<sub>1</sub> Alexa Fluor 594 Isotype Control (Catalog # IC002T). View our protocol for Staining Membrane-associated Proteins.

### PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

#### Stability & Storage

Protect from light. Do not freeze.

• 12 months from date of receipt, 2 to 8 °C as supplied.







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#### 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+T cells (5, 8). The interaction of TIM-4 with TIM-1 induces costimulatory and hyperproliferative signals in T cells (5).

#### References:

- 1. Kuchroo, V.K. et al. (2003) Nat. Rev. Immunol. 3:454.
- 2. Mariat, C. et al. (2005) Phil. Trans. R. Soc. B 360:1681.
- 3. Meyers, J.H. et al. (2005) Trends Mol. Med. 11:362.
- 4. Shakhov, A.N. et al. (2004) Eur. J. Immunol. 34:494.
- 5. Meyers, J.H. et al. (2005) Nat. Immunol. 6:455.
- 6. Feigelstock, D. et al. (1998) J. Virol. 72:6621.
- 7. McIntire, J.J. et al. (2001) Nat. Immunol. 2:1109.
- 8. Khademi, M. et al. (2004) J. Immunol. 172:7169.

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