

PRODUCT INFORMATION



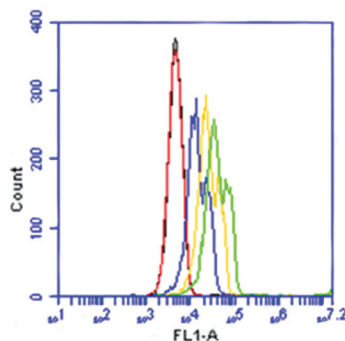
TIM-4 Monoclonal Antibody

Item No. 10322

Overview and Properties

Contents:	This vial contains 400 µg of protein A-purified monoclonal antibody.
Synonyms:	T cell Immunoglobulin and Mucin Domain-containing 4, T Cell Immunoglobulin Mucin Receptor 4, T cell Membrane Protein 4, TIMD-4
Immunogen:	Mouse peritoneal cell TIM-4
Species Reactivity:	(+) Human; other species not tested
Cross Reactivity:	(+) TIM-4
Uniprot No.:	Q96H15
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Armenian hamster
Applications:	Flow cytometry (FC) and immunocytochemistry (ICC); The optimal working concentration/dilution should be determined empirically.

Image



Black: Blank
Red: Normal Rabbit IgG-FITC (0.01 µg/ml)
Blue: TIM-4 Monoclonal Antibody (1 µg/ml)
Yellow: TIM-4 Monoclonal Antibody (5 µg/ml)
Green: TIM-4 Monoclonal Antibody (10 µg/ml)

Jurkat cells were fixed with cytospin, blocked with 5% normal goat serum, and washed between steps.
2°Ab used = Goat anti-hamster-FITC: 1:750.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

TIM-4 is a type I transmembrane protein and member of the T cell immunoglobulin and mucin domain-containing (TIM) family of immunoregulatory proteins.¹ It is composed of an N-terminal immunoglobulin variable (IgV) domain that binds to phosphatidylserine, as well as a mucin stalk, which contains O- and N-linked glycosylation sites, a transmembrane domain, and a C-terminal cytoplasmic tail, which lacks a tyrosine phosphorylation site, unlike TIM-1 and TIM-3.^{1,2} TIM-4 is expressed in antigen-presenting cells (APCs) such as dendritic cells and macrophages and binds to TIM-1 on activated T cells.³ It is mainly involved in phagocytosis of apoptotic cells *via* recognition of phosphatidylserine, but also plays a role in T cell proliferation and survival, viral entry, and antitumor immunity.^{2,4,5,6} TIM-4 targeting antibodies prevent HIV-1 entry into host cells *in vitro* and enhance the efficacy of anticancer vaccines in a murine melanoma model.^{5,6} SNPs in *TIMD4* are associated with increased susceptibility of asthma in children.⁷ Cayman's TIM-4 Monoclonal Antibody can be used for flow cytometry (FC) and immunocytochemistry (ICC) applications.

References

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4. Rodriguez-Manzanet, R., Meyers, J.H., Balasubramanian, S., *et al.* TIM-4 expressed on APCs induces T cell expansion and survival. *J. Immunol.* **180(7)**, 4706-4713 (2008).
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6. Baghdadi, M., Nagao, H., Yoshiyama, H., *et al.* Combined blockade of TIM-3 and TIM-4 augments cancer vaccine efficacy against established melanomas. *Cancer Immunol. Immunother.* **62(4)**, 629-637 (2013).
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