

**TIM-4 Antibody**  
**Catalog # ASC10423****Specification**

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**TIM-4 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q96H15</a>
Other Accession	<a href="#">NP_612388</a> , <a href="#">226529863</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	TIM-4 antibody can be used for the detection of TIM-4 by Western blot at 1 - 2 µg/mL.

**TIM-4 Antibody - Additional Information**Gene ID **91937****Other Names**

TIM-4 Antibody: TIM4, SMUCKLER, TIM4, T-cell immunoglobulin and mucin domain-containing protein 4, T-cell immunoglobulin mucin receptor 4, TIMD-4, T-cell immunoglobulin and mucin domain containing 4

**Target/Specificity**

TIMD4;

**Reconstitution & Storage**

TIM-4 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

TIM-4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**TIM-4 Antibody - Protein Information****Name** TIMD4**Synonyms** TIM4**Function**

Phosphatidylserine receptor that plays different role in immune response including phagocytosis of apoptotic cells and T-cell regulation. Controls T-cell activation in a bimodal fashion, decreasing the activation of naive T-cells by inducing cell cycle arrest, while increasing proliferation of activated T-cells by activating AKT1 and ERK1/2 phosphorylations and subsequent signaling pathways (By similarity). Also plays a role in efferocytosis which is the process by which apoptotic cells are removed by phagocytic cells (PubMed: <a href="http://www.uniprot.org/citations/32703939"

target="\_blank">32703939</a>, PubMed:<a href="http://www.uniprot.org/citations/34067457" target="\_blank">34067457</a>). Mechanistically, promotes the engulfment of apoptotic cells or exogenous particles by securing them to phagocytes through direct binding to phosphatidylserine present on apoptotic cells, while other engulfment receptors such as MERTK efficiently recognize apoptotic cells and mediate their ingestion (PubMed:<a href="http://www.uniprot.org/citations/32640697" target="\_blank">32640697</a>). Additionally, promotes autophagy process by suppressing NLRP3 inflammasome activity via activation of LKB1/PRKAA1 pathway in a phosphatidylserine-dependent mechanism (By similarity).

#### Cellular Location

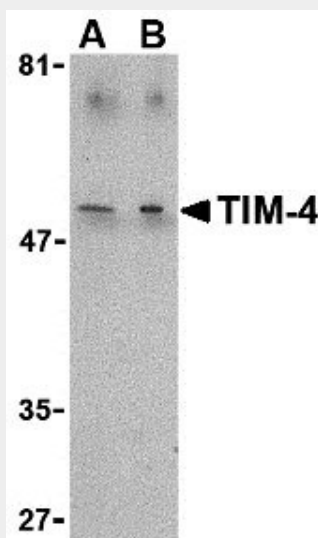
Cell membrane; Single-pass type I membrane protein. Secreted, extracellular exosome

#### TIM-4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### TIM-4 Antibody - Images



Western blot analysis of TIM-4 in Jurkat lysate with TIM-4 antibody at (A) 1 and (B) 2 µg/mL.

#### TIM-4 Antibody - Background

**TIM-4 Antibody:** The T cell immunoglobulin and mucin domain containing protein (TIM) family encodes cell surface receptors that are involved in the regulation of T helper (Th) -1 and -2 cell-mediated immunity. TIM-4, which is preferentially expressed on macrophages and dendritic cells, is the natural ligand of TIM-1, and this binding leads to T-cell expansion and cytokine production. Unlike other members of the TIM family, TIM-4 lacks a putative tyrosine phosphorylation signal sequence in its intracellular domain. The TIM-4 gene maps to a locus associated with

predisposition to asthma in both mice and humans and with its connection to TIM-1-triggered Th2 responsiveness, may be considered as a candidate disease/predisposition gene for asthma.

#### **TIM-4 Antibody - References**

Meyers JH, Sabatos CA, Chakravarti S, et al. The TIM family regulates autoimmune and allergic diseases. Trends Mol. Med. 2005; 11:362-9.

Meyers JH, Chakravarti S, Schlesinger D, et al. TIM-4 is the ligand for TIM-1, and the TIM-1-TIM4 interaction regulates T cell proliferation. Nat. Immunol. 2005; 6:455-64.

Kuchroo VK, Umetsu DT, DeKruyff RH, et al. The TIM gene family: emerging roles in immunity and disease. Nat. Rev. Immunol. 2003; 3:454-62.

Shakhov AN, Rybtsov S, Tumanov AV, et al. SMUCKLER/TIM4 is a distinct member of TIM family expressed by stromal cells of secondary lymphoid tissues and associated with lymphotoxin signaling.