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# TIM-1 Antibody

Catalog # ASC10421

## Product Information

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| **Application** | WB, IF, E, IHC-P |
| **Primary Accession** | Q96D42 |
| **Other Accession** | NP_036338, 153085427 |
| **Reactivity** | Human, Mouse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Calculated MW** | 39250 |
| **Concentration (mg/ml)** | 1 mg/mL |
| **Conjugate** | Unconjugated |
| **Application Notes** | TIM-1 antibody can be used for the detection of TIM-1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL. |

## Additional Information

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| **Gene ID** | 26762 |
| **Other Names** | TIM-1 Antibody: TIM, KIM1, TIM1, HAVCR, KIM-1, TIM-1, TIMD1, TIMD-1, HAVCR-1, Hepatitis A virus cellular receptor 1, Kidney injury molecule 1, HAVcr-1, hepatitis A virus cellular receptor 1 |
| **Target/Specificity** | HAVCR1; |
| **Reconstitution & Storage** | TIM-1 antibody can be stored at 4℃ for three months and -20℃, 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-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | HAVCR1 |
| **Synonyms** | KIM1, TIM1, TIMD1 |
| **Function** | Phosphatidylserine receptor that plays an important functional role in regulatory B-cell homeostasis including generation, expansion and suppressor functions (PubMed:18082433, PubMed:18414680). Involved in efferocytosis, the process by which apoptotic cells are removed, by binding to phosphatidylserine present on apoptotic cells and promoting their engulfment (PubMed:18082433). Confers phagocytic ability on injured kidney |

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| | epithelial cells, allowing them to bind to and internalize apoptotic bodies and necrotic debris following kidney injury (PubMed:17471468, PubMed:18414680). The ectodomain binds to the surface of apoptotic kidney epithelial cells via phosphatidylserine and oxidized phospholipids exposed on the cell membrane of the apoptotic cells (PubMed:18414680). HAVCR1-expressing cells are also capable of phagocytosing Gram-negative and Gram-positive bacteria (PubMed:18414680). As P-selectin/SELPLG ligand, plays a specialized role in activated but not naive T-cell trafficking during inflammatory responses (PubMed:24703780). Controls thereby T-cell accumulation in the inflamed central nervous system (CNS) and the induction of autoimmune disease (PubMed:24703780). Acts as a regulator of T-cell proliferation (By similarity). Also regulates expression of various anti-inflammatory cytokines and co-inhibitory ligands including IL10 (By similarity). |
| **Cellular Location** | Cell membrane; Single-pass type I membrane protein. Cell projection, phagocytic cup. Cytoplasmic vesicle, phagosome |
| **Tissue Location** | Widely expressed, with highest levels in kidney and testis. Expressed by activated CD4+ T-cells during the development of helper T-cells responses. |

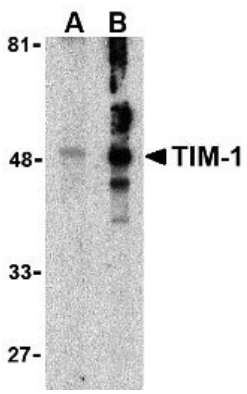
## Background

TIM-1 Antibody: The human form of TIM-1 was initially discovered as a membrane glycoprotein through which the hepatitis A virus can gain entry into a cell. It was also identified as kidney injury molecule 1 (Kim-1), a predicted adhesion molecule that is upregulated on the surfaces of kidney epithelia. It is also expressed on T helper 2 (Th2) cells of the immune system, and following the binding of its natural ligand TIM-4, stimulates T cell expansion and cytokine production in response to viral challenge. It has been suggested that hyperactivation of TIM-1 leads to an increased level of Th2 responsiveness and asthma susceptibility, and antibodies to TIM-1 may therefore be a novel approach to treating asthma.

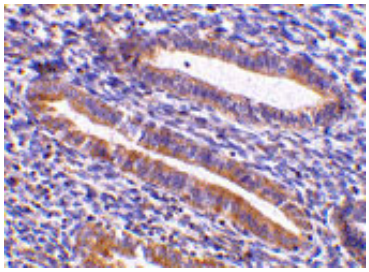
## References


Feigelstock D, Thompson P, Mattoo P, et al. The human homolog of HAVcr-1 codes for a hepatitis A virus cellular receptor. J. Virol. 1998; 72:6621-8.
Ichimura T, Bonventre JV, Bailly V, et al. Kidney injury molecule-1 (KIM-1), a putative epithelial cell adhesion molecule containing a novel immunoglobulin domain, is up-regulated in renal cells after injury. J. Biol. Chem.1998; 273:4135-42.
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.

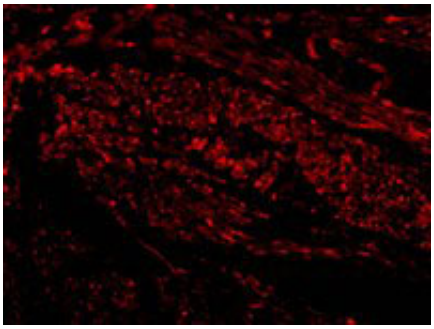

## Images




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



Immunohistochemistry of TIM-1 in human uterus tissue with TIM-1 antibody at 10 µg/mL.



Immunofluorescence of TIM-1 in Human Uterus cells with TIM-1 antibody at 20 µg/mL.

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