

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TIM-1/KIM-1/HAVCR in direct ELISAs.
Source	Monoclonal Rat IgG _{2B} Clone # 222417
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse TIM-1/KIM-1/HAVCR Tyr22-Thr212 Accession # NP_001160104
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

ELISA Optimal dilution of this antibody should be experimentally determined.

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

BACKGROUND

TIM-1 (T cell-immunoglobulin-mucin; also known as KIM-1 or HAVCR) is a 70-80 kDa, type I transmembrane glycoprotein member of the TIM family of immunoglobulin superfamily molecules (1-4). This gene family is involved in the regulation of Th1 and Th2-cell-mediated immunity. In mouse, there are eight known TIM genes (# 1-8) vs. only three genes in human (# 1, 3, and 4) (1, 2). Mouse TIM-1 and -2 are counterparts of human TIM-1 while mouse TIM-5 through 8 have no human counterparts (2). Mouse TIM-1 is synthesized as a 305 amino acid (aa) precursor that contains a 21 aa signal sequence, a 216 aa extracellular domain (ECD), a 21 aa transmembrane segment and a 47 aa cytoplasmic domain (5, 6). The ECD contains one V-type Ig-like domain and a mucin region characterized by multiple T-S-P motifs. The mucin region undergoes extensive O-linked glycosylation. The mouse TIM-1 gene is highly polymorphic and, based on rat, may undergo alternate splicing (4, 6). For instance, HBA mice show a 15 aa deletion in the mucin region that occurs in BALB/c mice (6). This difference is associated with a decreased susceptibility to asthma. Other polymorphisms are also documented (6). In human, TIM-1 is known to circulate as a soluble form. It undergoes constitutive cleavage by an undefined MMP, releasing a 75-85 kDa soluble molecule (5). The same thing might be expected in mouse. The ECD of mouse TIM-1 is 50%, 39% and 80% aa identical to human, canine and rat TIM-1 ECD, respectively. The only two reported ligands for TIM-1 are TIM-4 and the hepatitis A virus (8, 9). However, others are believed to exist, and based on the ligand for TIM-3, one possibility might be an S-type lectin (10). TIM-1 ligation induces T cell proliferation and promotes cytokine production (1, 10). In particular, it induces IL-4 production, and requires the cytoplasmic tyrosine phosphorylation motif (5).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.