Mouse TIM-1/KIM-1/HAVCR Alexa Fluor® 488-conjugated Antibody

Monoclonal Rat IgG_{2B} Clone # 222417

Catalog Number: FAB18171G

100 µg

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 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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

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