Mouse TIM-1/KIM-1/HAVCR Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1817

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TIM-1/KIM-1/HAVCR in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human TIM-1, recombinant mouse (rm) TIM-2, rmTIM-3, rmTIM-4, rmTIM-6, and rmTIM-7 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse TIM-1/KIM-1/HAVCR Tyr22-Thr212 Accession # NP_001160104
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

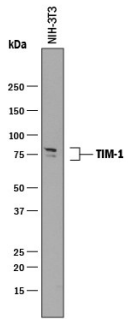
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	0.25 µg/mL	See Below

DATA

Western Blot



Detection of Mouse TIM-1/KIM-1/HAVCR by Western Blot. Western blot shows lysates of NIH-3T3 mouse embryonic fibroblast cell line. PVDF membrane was probed with 0.25 µg/mL of Goat Anti-Mouse TIM-1/KIM-1/HAVCR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1817) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for TIM-1/KIM-1/HAVCR at approximately 70-80 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

TIM-1 (T cell-immunoglobulin-mucin; also KIM-1 and 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).

References:

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