

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TIM-1/KIM-1/HAVCR in direct ELISAs.
Source	Recombinant Monoclonal Mouse IgG ₁ Clone # 526114R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TIM-1/KIM-1/HAVCR Ser21-Thr288 Accession # AAC39862
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

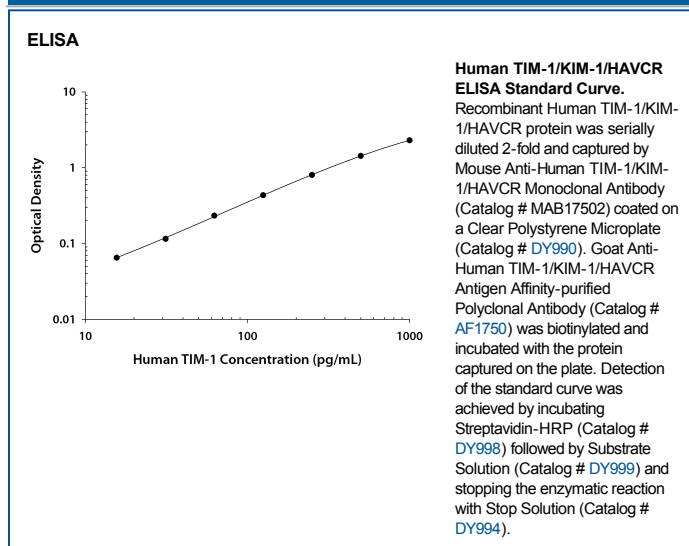
APPLICATIONS

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.

ELISA This antibody functions as an ELISA capture antibody when paired with Goat Anti-Human TIM-1/KIM-1/HAVCR Antigen Affinity-purified Polyclonal Antibody (Catalog # [AF1750](#)).

This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human TIM-1/KIM-1/HAVCR DuoSet ELISA Kit (Catalog # [DY1750B](#)) for convenient development of a sandwich ELISA. For a complete optimized ELISA, we offer the Human Serum TIM-1/KIM-1/HAVCR Quantikine ELISA Kit (Catalog # [DSKM100](#)) or the Human Urinary TIM-1/KIM-1/HAVCR Quantikine ELISA Kit (Catalog # [DKM100](#)).

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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. <ul style="list-style-type: none"> ● 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.

BACKGROUND

TIM-1 (T cell-immunoglobulin-mucin; also KIM-1 and HAVcr-1) is a 100 kDa, type I transmembrane glycoprotein member of the TIM family of immunoglobulin superfamily molecules (1-3). This gene family is involved in the regulation of Th1 and Th2-cell-mediated immunity. Human TIM-1 is synthesized as a 359 amino acid (aa) precursor that contains a 20 aa signal sequence, a 270 aa extracellular domain (ECD), a 21 aa transmembrane segment and a 48 aa cytoplasmic domain (4-6). The ECD contains one V-type Ig-like domain and a mucin region characterized by multiple PTTTTL motifs. The mucin region undergoes extensive O-linked glycosylation. The TIM-1 gene is highly polymorphic and undergoes alternate splicing (1). For instance, the presence of a six aa sequence (MTTTPV) at position # 137 of the mature molecule is associated with protection from atopy in people with a history of hepatitis A (7, 8). There are two cytoplasmic alternate splice forms of TIM-1. One is a long (359 aa) kidney form termed TIM-1b, and one is a short (334 aa) liver form termed TIM-1a. Both are identical through the first 323 aa of their precursors. TIM-1b contains a tyrosine phosphorylation motif that is not present in 1a (6). TIM-1 is also known to circulate as a soluble form. Constitutive cleavage by an undefined MMP (possibly ADAM33) releases an 85-90 kDa soluble molecule (6). The ECD of human TIM-1 is 50% and 43% aa identical to mouse and canine TIM-1 ECD, respectively. The only two reported ligands for TIM-1 are TIM-4 and the hepatitis A virus (4, 9). However, others are believed to exist, and based on the ligand for TIM-3, one may well be an S-type lectin (10). TIM-1 ligation induces T cell proliferation and promotes cytokine production (1, 10).

References:

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10. Meyers, J.H. *et al.* (2005) *Nat. Immunol.* **6**:455.