

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TIM-4 in Western blots. In Western blots, less than 1% cross-reactivity with recombinant human (rh) TIM-1, recombinant mouse (rm) TIM-2, rhTIM-3, rmTIM-4, rmTIM-5, and rmTIM-6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TIM-4 Glu25-Leu315 Accession # Q96H15
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	0.1 µg/mL	Recombinant Human TIM-4 (Catalog # 2929-TM)

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.
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-4 (T cell; immunoglobulin; mucin-4), also known as SMUCKLER, is a 60 kDa member of the TIM family of immune regulating proteins. TIMs are type I transmembrane proteins with one Ig-like V domain and one Ser/Thr-rich mucin domain (1-3). The human TIM-4 cDNA encodes a 378 amino acid (aa) precursor that includes a 24 aa signal sequence, a 290 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 43 aa cytoplasmic tail (4). Structurally, TIM-4 is distinguished from other TIMs by the presence of an RGD motif in its Ig domain and the lack of a site for tyrosine phosphorylation in its cytoplasmic tail. The mucin domain in TIM-4 is larger than in TIM-1 or TIM-3. Within the ECD, human TIM-4 shares 35% and 23% aa sequence identity with TIM-1 and TIM-3, respectively. A TIM-2 ortholog has not been identified in human. The ECD of human TIM-4 shares 45% aa sequence identity with that of mouse and rat TIM-4. TIM-4 is expressed by macrophages and mature dendritic cells but not by lymphocytes (4, 5). TIM-4 binds specifically to TIM-1 which is also the cellular receptor for the hepatitis A virus, and has been implicated in the development of asthma (5-7). Among hematopoietic cells, TIM-1 is expressed on activated B and T cells, preferentially in the Th2 subset of CD4⁺ T cells (5, 8). The interaction of TIM-4 with TIM-1 induces costimulatory and hyperproliferative signals in T cells (5).

References:

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