

Active Recombinant Human TIMD4 protein, Fc-tagged

Cat. No. TIMD4-244H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human TIMD4(Glu25-Gln314) fused Fc region of Human IgG1 was expressed in HEK293.
Species	Human
Source	HEK293
ProteinLength	25-314 a.a.
Description	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. Mature human TIM-4 consists of a 290 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 43 aa cytoplasmic tail. 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. Within the ECD human TIM-4 shares 45% aa sequence identity with mouse and rat TIM-4. TIM-4 is expressed by macrophages and mature dendritic cells but not by lymphocytes. It binds specifically to TIM-1 which is also the cellular receptor for hepatitis A virus and has been implicated in the development of asthma. Among hematopoietic cells, TIM-1 is expressed on activated B and T cells, preferentially in the Th2 subset of CD4+ T cells. The interaction of TIM-4 with TIM-1 induces co-stimulatory and hyperproliferative signals in T cells. TIM-4 also binds to phosphatidylserine (PS) on the surface of apoptotic cells. It enhances the clearance of apoptotic cells including T

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cells in the contraction phase of immune responses, apoptotic macrophages that accumulate in atherosclerosis, and dying neurons in the brain. TIM-4 is upregulated on some tumor cells and tumor-associated myeloid cells where it binds Integrin alpha V beta 3, contributes to tumor progression, and inhibits tumor-specific cellular immunity.

Predicted N Terminal	Glu25
Form	Lyophilized from a 0.2 µm filtered solution in PBS.
Bio-activity	Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated human T cells. The ED50 for this effect is 0.15-0.75 µg/mL.
Molecular Mass	Predicted Molecular Mass: 58 kDa SDS-PAGE: 95-113 kDa, reducing conditions
Endotoxin	<0.1 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 µg/mL in PBS.

GENE INFORMATION

Gene Name TIMD4 T-cell immunoglobulin and mucin domain containing 4 [Homo sapiens]

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Official Symbol	TIMD4
Synonyms	TIMD4; T-cell immunoglobulin and mucin domain containing 4; T-cell immunoglobulin and mucin domain-containing protein 4; TIM-4; TIMD-4; T-cell membrane protein 4; TIM4; SMUCKLER; FLJ27515;
Gene ID	91937
mRNA Refseq	NM_001146726
Protein Refseq	NP_001140198
MIM	610096
UniProt ID	Q96H15

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