TIM-3/HAVCR2 Protein, Cynomolgus (HEK293, His)

Cat. No.:	HY-P72447
Synonyms:	Hepatitis A virus cellular receptor 2 homolog; T cell immunoglobulin and mucin domain3; HAVCR2; CD366; TIM3
Species:	Cynomolgus
Source:	HEK293
Accession:	G7P6Q7 (S22-R201)
Gene ID:	10214172
Molecular Weight:	26-30 kDa

PROPERTIES

AA Sequence	S E V E Y I A E V G Q N A Y L P C S Y T P A P P G N L V P V C W G K G A C P V F D C S N V V L R T D N R D V N D R T S G R Y W L K G D F H K G D V S L T I E N V T L A D S G V Y C C R I Q I P G I M N D E K H N V K L V V I K P A K V T P A P T L Q R D L T S A F P R M L T T G E H G P A E T Q T P G S L P D V N L T V S N F F C E L Q I F T L T N E L R D S G A T I R
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	TIM-3/HAVCR2 protein, a cell surface receptor, plays a pivotal role in modulating both innate and adaptive immune responses. Predominantly considered as having an inhibitory function, the reported stimulating functions suggest a nuanced influence based on cellular context and ligand specificity. It regulates macrophage activation and inhibits T-helper type 1 lymphocyte (Th1)-mediated auto- and alloimmune responses, promoting immunological tolerance. In CD8+ cells, TIM-3 attenuates TCR-induced signaling by blocking NF-kappaB and NFAT promoter activities, leading to reduced IL-2 secretion. This inhibitory function is proposed to involve its association with LCK, impairing the phosphorylation of TCR subunits. Conversely, TIM-3 has been shown to activate TCR-induced signaling in T-cells, likely implicating ZAP70, LCP2,

LCK, and FYN. The receptor for LGALS9, TIM-3's binding to LGALS9 is believed to suppress T-cell responses, leading to apoptosis of antigen-specific cells. Additionally, TIM-3 may recognize phosphatidylserine on apoptotic cells, mediating their phagocytosis, and positively regulates innate immune responses, particularly in dendritic cells. It also plays a role in suppressing nucleic acid-mediated innate immune responses in tumor-infiltrating dendritic cells and negatively regulates NK cell function in LPS-induced endotoxic shock. Interactions with various signaling molecules, including HMGB1, BAG6, PIK3R1, PIK3R2, FYN, and ILF3, further contribute to the intricate regulatory functions of TIM-3 in immune responses.

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