B7-H4 Protein, Rat (HEK293, His)

Cat. No.:	HY-P75485
Synonyms:	V-set domain containing T-cell activation inhibitor 1; VTCN1; Protein B7S1; B7-H4
Species:	Rat
Source:	HEK293
Accession:	Q501W4 (F29-S256)
Gene ID:	295322
Molecular Weight:	Approximately 42-65 kDa due to the glycosylation.

PROPERTIES

AA Sequence	F G I S G K H F I T V T T F T S A G N I G E D G T L S C T F E P D I K L N G I V I Q W L K E G I K G L V H E F K E G K D D L S Q Q H E M F R G R T A V F A D Q V V V G N A S L R L K N V Q L T D A G T Y T C Y I H T S K G K G N A N L E Y K T G A F S M P E I N V D Y N A S S E S L R C E A P R W F P Q P T V A W A S Q V D Q G A N F S E V S N T S F E L N S E N V T M K V V S V L Y N V T I N N T Y S C M I E N D I A K A T G D I K V T D S E V K R R S Q L E L L N S
Biological Activity	Measured by its ability to inhibit anti-CD3 antibody induced IL-2 secretion by human T cells. The ED_{50} for this effect is 0.9752 μg/mL in the presence of 5μg/mL anti-CD3, corresponding to a specific activity is 1.025×10^3 U/mg.
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	B7-H4 protein functions as a negative regulator of T-cell-mediated immune responses by effectively suppressing T-cell activation, proliferation, cytokine production, and the development of cytotoxicity. Particularly noteworthy is its role when expressed on the cell surface of tumor macrophages, where it collaborates with regulatory T-cells (Treg) to suppress tumor-

associated antigen-specific T-cell immunity. This dual action underscores its significance in creating an immunosuppressive microenvironment. Furthermore, B7-H4 is implicated in promoting epithelial cell transformation, suggesting its involvement in processes associated with altered cellular states and potential implications in the context of pathological conditions.

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