CTLA-4 Protein, Rat (HEK293, His)

Cat. No.:	HY-P74215
Synonyms:	Cytotoxic T-lymphocyte associated protein 4; CTLA4; CD152
Species:	Rat
Source:	HEK293
Accession:	Q62859 (E36-D161)
Gene ID:	63835
Molecular Weight:	Approximately 21-30 kDa due to the glycosylation.

PROPERTIES

AA Sequence	E A I Q V T Q P S V V L A S S H G V A S F P C E Y A S S H N T D E V R V T V L R Q T N D Q V T E V C A T T F T V K N T L G F L D D P F C S G T F N E S R V N L T I Q G L R A A D T G L Y F C K V E L M Y P P P Y F V G M G N G T Q I Y V I D P E P C P D S D
Biological Activity	Measured by its ability to inhibit IL-2 secretion by stimulated Jurkat human acute T cell leukemia cells. The ED_{50} for this effect is 0.231 μg/mL when stimulated with 1 μg/mL Recombinant Human B7-1 in the presence of PHA, corresponding to a specific activity is 4.329×10^3 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	CTLA-4 protein operates as a key inhibitory receptor, serving as a major negative regulator in T-cell responses. Its pivotal role lies in the potent affinity CTLA-4 exhibits for its natural B7 family ligands, CD80 and CD86, a binding strength surpassing that of their counterpart stimulatory coreceptor, CD28. This heightened affinity enables CTLA-4 to effectively temper T-cell activation, forming a crucial component of the regulatory mechanisms governing immune responses. The nuanced balance

between inhibitory and stimulatory signals orchestrated by CTLA-4 and its ligands plays a central role in modulating the intensity and duration of T-cell-mediated immune reactions.

Caution: Product has not been fully validated for medical applications. For research use only.

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