

Product Data Sheet

CTLA-4 Protein, Mouse (Biotinylated, HEK293, His)

Cat. No.:	HY-P75317
Synonyms:	Cytotoxic T-lymphocyte associated protein 4; CTLA4; CD152
Species:	Mouse
Source:	HEK293
Accession:	P09793 (E36-F162)
Gene ID:	12477
Molecular Weight:	Approximately 15.3 kDa

PROPERTIES	
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ in ddH_2O.
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, a pivotal inhibitory receptor, acts as a primary negative regulator in T-cell responses, exerting its influence withis the intricate network of immune modulation. This regulatory function arises from the distinct property of CTLA-4, showcasing significantly heightened affinity for its natural B7 family ligands, CD80 and CD86, in comparison to the cogna stimulatory coreceptor CD28. The homodimeric structure of CTLA-4, intricately linked by disulfide bonds, underscores it role as a molecular sentinel in immune regulation. Functionally, CTLA-4 binds avidly to CD80/B7-1 and CD86/B7.2, competitively engaging with these ligands to suppress T-cell activation and finely tune immune responses. Additionally, CTLA-4 interacts with ICOSLG, contributing to its multifaceted engagement in immune checkpoint pathways.

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

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