PD-1 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P70640
Synonyms:	Programmed cell death protein 1; PD-1; CD279; Pdcd1; mPD-1
Species:	Mouse
Source:	HEK293
Accession:	Q02242 (L25-Q167)
Gene ID:	18566
Molecular Weight:	Approximately 25-43 kDa due to the glycosylation.

PROPERTIES

AA Sequence	L E V P N G P W R S L T F Y P A W L T V S E G A N A T F T C S L S N W S E D L M L N W N R L S P S N Q T E K Q A A F C N G L S Q P V Q D A R F Q I I Q L P N R H D F H M N I L D T R R N D S G I Y L C G A I S L H P K A K I E E S P G A E L V V T E R I L E T S T R Y P S P S P K P E G R F Q
Biological Activity	1.Determined by its ability to prevent plate adhesion of PHA-stimulated Jurkat cells in the presence of 625 ng/mL of bound hPD-L1. The ED_{50} for this effect is <1 μg/mL. 2.Immobilized Recombinant Mouse PD-1 at 1 μg/ml (100 μl/well) can bind Recombinant Mouse PD-L1. The ED_{50} for this effect is 0.5223 μg/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris-HCl, 150 mM NaCl, pH 8.0 or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	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 from date of receipt. 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	PD-1, an inhibitory receptor expressed on antigen-activated T-cells, plays a crucial role in the induction and maintenance of immune tolerance to self. Upon binding to ligands like CD274/PDCD1L1 and CD273/PDCD1LG2, PD-1 delivers inhibitory signals, suppressing T-cell activation and contributing to the regulation of immune responses. Following T-cell receptor

engagement, PD-1 associates with CD3-TCR in the immunological synapse, directly inhibiting T-cell activation. The inhibitory effects involve the recruitment of PTPN11/SHP-2, which dephosphorylates key signaling molecules proximal to the TCR. Exploited by tumors, the PD-1-mediated inhibitory pathway serves to attenuate anti-tumor immunity and promote tumor survival. PD-1 exists as a monomer and interacts with CD274/PDCD1L1 and CD273/PDCD1LG2, while interaction with FBXO38 leads to ubiquitination and proteasomal degradation.

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