

Overview

Synonyms	PD-1; CD279; PDCD1
Description	Programmed cell death protein 1 , also known as PD-1 and CD279 (cluster of differentiation 279) or PDCD1, is a protein that in humans is encoded by the PDCD1 gene. PD-1 is a cell surface receptor that belongs to the immunoglobulin superfamily and is expressed on T cells and pro-B cells. PD-1 binds two ligands, PD-L1 and PD-L2. PD-1 and its ligands play an important role in down regulating the immune system by preventing the activation of T-cells, which in turn reduces autoimmunity and promotes self-tolerance. The inhibitory effect of PD-1 is accomplished through a dual mechanism of promoting apoptosis (programmed cell death) in antigen specific T-cells in lymph nodes while simultaneously reducing apoptosis in regulatory T cells (suppressor T cells). Recombinant Human PD-1 produced in <i>CHO</i> cells with C-terminal Fc tag, is a polypeptide chain containing 378 amino acids. A fully biologically active molecule, rhPD-1 has a molecular mass of 60-65 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Source	<i>CHO</i>
Biological Activity	Activity1: Immobilized PD-L1/B7-H1 Fc Chimera, Human (Cat.No.Z03371) at 1 µg/ml (100 µl/well) can bind biotinylated PD-1 Fc Chimera with a linear range of 0.1-1 µg/ml. Activity2: Immobilized PD-L1, His, Human (Cat.No.Z03425) at 2 µg/mL (100 µL/well) can bind PD-1 Fc Chimera, Human with a linear range of 0.024-0.39 µg/ml.
Sequence	LDSPDRPWNP PTFSPALLVV TEGDNATFTC SFSNTSESFV LNWYRMSPSN QTDKLAAPFE DRSQPGQDCR FRVTQLPNGR DFHMSVVRAR RNDSGTYLCG AISLAPKAQI KESLRAELRV TERRAEVPTA HPSPSRPAG QFQ

Properties

Measured Molecular Weight	60-65kDa, observed by reducing SDS-PAGE.
Purity	> 98% as analyzed by reducing SDS-PAGE.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS.
Reconstitution	Reconstituted in ddH ₂ O or PBS at 100 µg/ml.
Endotoxin Level	<0.2 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant Human PD-1 remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human PD-1 should be stable up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.
Note	For research use only

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