

DATASHEET

Version 2016-08-02

PD-1 Fc Chimera, Human**Cat. No.:** Z03370-1**Size:** 1 mg**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 *CHO* cells with C-terminal Fc tag, is a polypeptide chain containing 376 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 at GenScript.

Amino Acid Sequence:

LDSPDRPWNPTFSPALLVVTEGDNATFTCSFSNTSESFV
LNWYRMSPSNQTDKLAAPFERDSQPGQDCR
FRVTQLPNGRDFHMSVVRARRNDSGTLYLCAISLAPKAQI
KESLRAELRVTERRAEVPTAHPSPSPRPAGQFQ

Source: *CHO*

Biological Activity: Measured by its binding ability in a functional ELISA. Immobilized rh PD-L1/B7-H1 Fc Chimera at 1 µg/ml (100 µl/well) can bind biotinylated rhPD-1 Fc Chimera with a linear range of 0.1-1 µg/ml when detected by HRP*-Labeled Streptavidin.

Molecular Weight: 60-65kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

Purity: > 98% as analyzed by reducing SDS-PAGE.

Endotoxin Level: <0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant **Human PD-1** remains stable up to 6 months at -80°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.**

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