Datasheet for ABIN2181605

PD-1 Protein (AA 25-167) (His tag)

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Overview

Quantity:	100 µg
Target:	PD-1 (PDCD1)
Protein Characteristics:	AA 25-167
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This PD-1 protein is labelled with His tag.

Product Details

Sequence:	AA 25-167
Characteristics:	This protein carries a polyhistidine tag at the C-terminus, and has a calculated MW of 16.77 kDa. The N-terminus Sequence Analysis is Leu 25. The reducing (R) protein migrates as 25-45 kDa in SDS-PAGE due to glycosylation.
Purity:	>95 % as determined by SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.
Grade:	HPLC verified

Target Details

Target:	PD-1 (PDCD1)
Alternative Name:	PD-1 (PDCD1 Products)
Background:	Programmed cell death protein 1 (PD-1) is also known as CD279 and PDCD1, is a type I membrane protein and is a member of the extended CD28/CTLA-4 family of T cell regulators. PDCD1 is expressed on the surface of activated T cells, B cells, macrophages, myeloid cells and a subset of thymocytes. PD-1 has two ligands, PD-L1 and PD-L2, which are members of the B7 family. PD-L1 is expressed on almost all murine tumor cell lines, including PA1 myeloma, P815 mastocytoma, and B16 melanoma upon treatment with IFN-γ. PD-L2 expression is more restricted and is expressed mainly by DCs and a few tumor lines. PD1 inhibits the T-cell proliferation and production of related cytokines including IL-1, IL-4, IL-10 and IFN-γ by suppressing the activation and transduction of PI3K/AKT pathway. In addition, coligation of PD1 inhibits BCR-mediating signal by dephosphorylating key signal transducer. In vitro, treatment of anti-CD3 stimulated T cells with PD-L1-Ig results in reduced T cell proliferation and IFN-γ secretion. Monoclonal antibodies targeting PD-1 that boost the immune system are being developed for the treatment of cancer.
Molecular Weight:	16.8 kDa
NCBI Accession:	NP_005009
Pathways:	Cancer Immune Checkpoints

Application Details

Restrictions:	For Research Use only

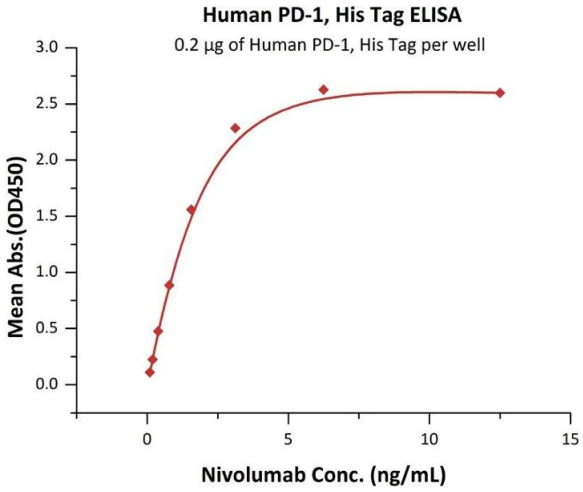
Handling

Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C
Storage Comment:	No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C), After reconstitution under sterile conditions for 3 months (-70 °C).

Publications

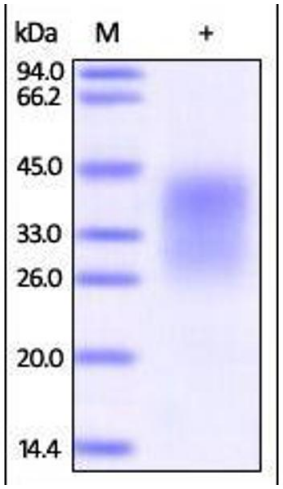
Product cited in: Mettler Izquierdo, Varela, Park, Collarini, Lu, Pramanick, Rucker, Lopalco, Etches, Harriman: " High-efficiency antibody discovery achieved with multiplexed microscopy." in: **Microscopy (Oxford, England)**, Vol. 65, Issue 4, pp. 341-52, (2018) (PubMed).

Images



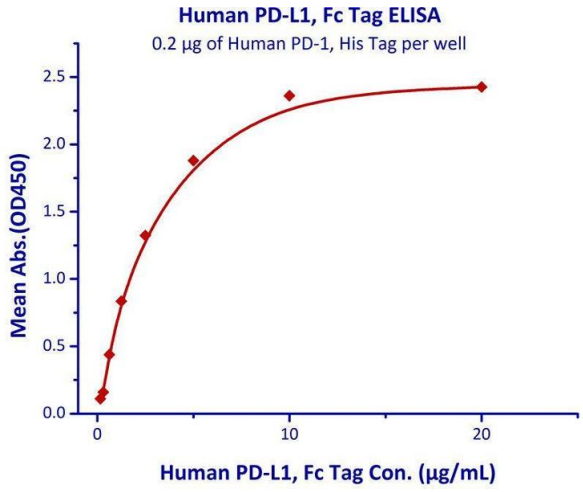
ELISA

Image 1. Immobilized Human PD-1, His Tag (ABIN2181606,ABIN2181605) at 2 μg/mL (100 μL/well) can bind Nivolumab with a linear range of 0.1-3 ng/mL (Routinely tested).



SDS-PAGE

Image 2. Human PD-1, His Tag (HPLC-verified) on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



Binding Studies

Image 3. Immobilized Human PD-1, His Tag with a linear range of 0.31-1.25 μg/mL.