Datasheet for ABIN2181617

PD-1 Protein (AA 25-167) (Fc Tag)

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Overview

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

Product Details

Sequence:	AA 25-167
Characteristics:	This protein carries a human IgG1 Fc tag at the C-terminus. The protein has a calculated MW of 43.2 kDa. The protein migrates as 60-66 kDa under reducing (R) condition (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.

Target Details

Target:	PD-1 (PDCD1)

Target Details

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:	42.8 kDa
NCBI Accession:	NP_032824
Pathways:	Cancer Immune Checkpoints

Application Details

Restrictions:	For Research Use only

Handling

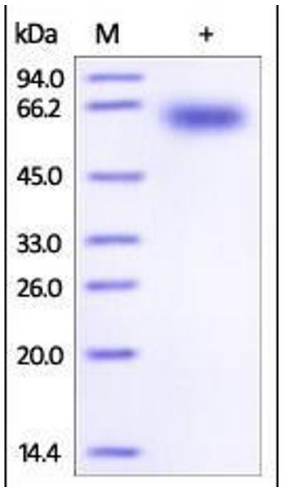
Format:	Lyophilized
Buffer:	Tris with Glycine, Arginine and NaCl, pH 7.5
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C
Storage Comment:	No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C), After reconstitution under sterile conditions for 3 months (-70 °C).

Publications

Product cited in:	Mukundan, Guan, Singleton, Yang, Li, Parekkadan: "Artificial T Cell Mimetics to Combat Melanoma Tumor Growth." in: **American journal of advanced drug delivery**, Vol. 6, Issue 1, pp.

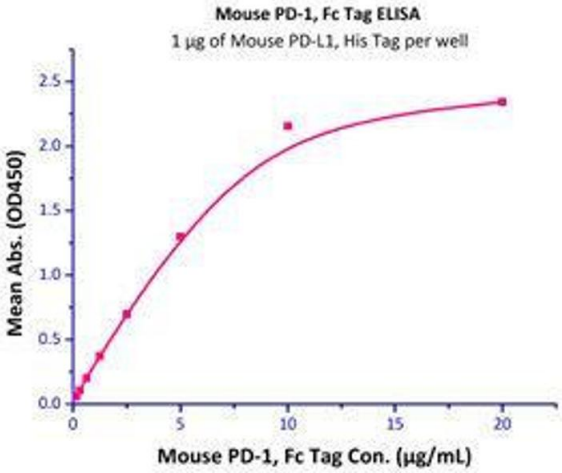
21-32, (2018) (PubMed).

Images



SDS-PAGE

Image 1. Mouse PD-1, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 92%.



Binding Studies

Image 2. Immobilized Mouse PD-L1, His Tag (Cat# PD1-M5220) at 10 μg/mL (100 μl/well) can bind Mouse PD-1, Fc Tag (Cat# PD1-M5259) with a linear range of 0.16-5 μg/mL.