

Recombinant Human PDCD1 protein, Mouse IgG2a Fc-tagged (HPLC-verified)

Cat. No. PDCD1-355H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human PDCD1 protein (Leu25-Gln167)(HPLC-verified), fused to Mouse IgG2a Fc tag at C-terminus, was expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	143
Description	<p>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-mediated 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.</p>

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 42.5 kDa. The protein migrates as 55-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 0.1 EU per ug by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	PDCD1
Official Symbol	PDCD1
Synonyms	PDCD1; programmed cell death 1; programmed cell death protein 1; CD279; PD1; protein PD-1; PD-1; SLEB2; hPD-1; hPD-I
Gene ID	5133
mRNA Refseq	NM_005018

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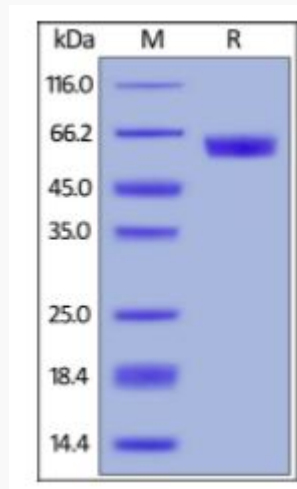
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MIM 600244

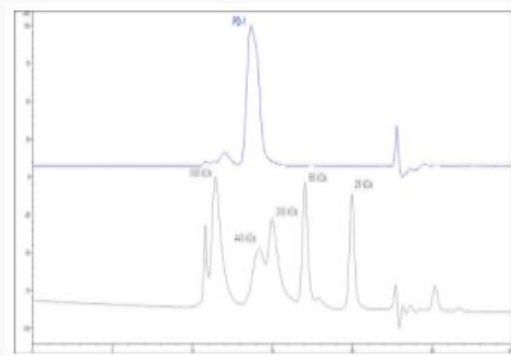
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**SDS-PAGE of
PDCD1-355H**



Human PD-1, Mouse IgG2a Fc 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%.

**SEC-HPLC of
PDCD1-355H**



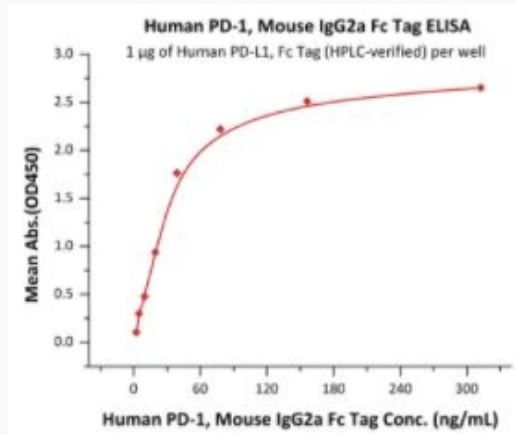
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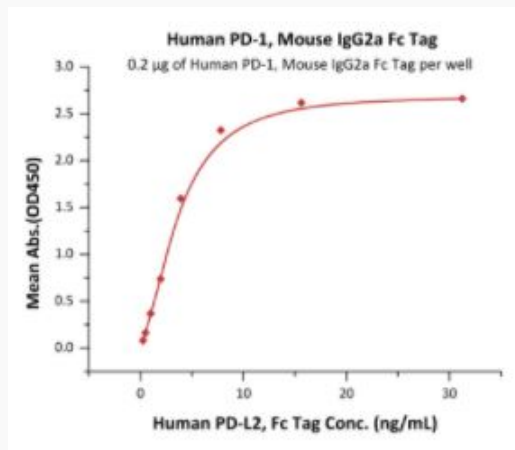
The purity of Human PD-1, Mouse IgG2a Fc Tag (HPLC-verified) was greater than 90% as determined by SEC-HPLC.

**Bioactivity-ELISA of
PDCD1-355H**



Immobilized Human PD-L1, Fc Tag (HPLC-verified) at 10 µg/mL (100 µL/well) can bind Human PD-1, Mouse IgG2a Fc Tag (HPLC-verified) with a linear range of 2-40 ng/mL (QC tested).

**Bioactivity-ELISA of
PDCD1-355H**



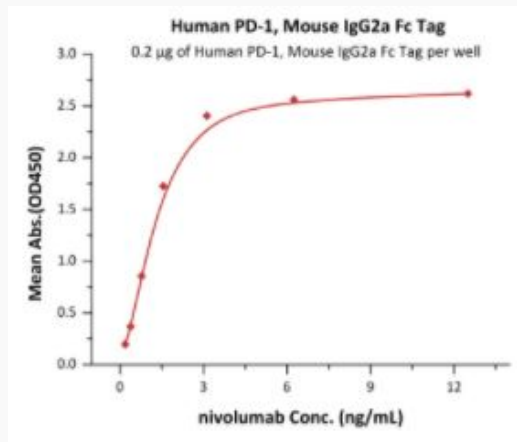
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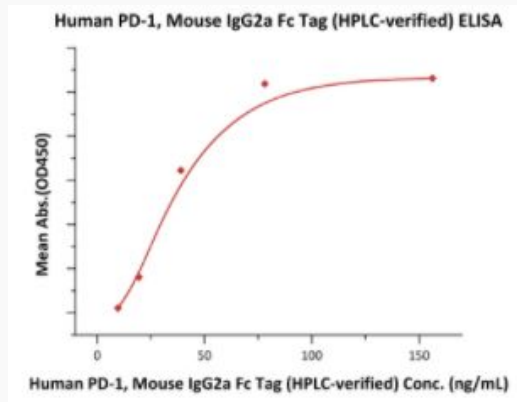
Immobilized Human PD-1, Mouse IgG2a Fc Tag (HPLC-verified) at 2 µg/mL (100 µL/well) can bind Human PD-L2, Fc Tag with a linear range of 0.2-4 ng/mL (Routinely tested).

**Bioactivity-ELISA of
PDCD1-355H**



Immobilized Human PD-1, Mouse IgG2a Fc Tag (HPLC-verified) at 2 µg/mL (100 µL/well) can bind Nivolumab with a linear range of 0.1-2 ng/mL (Routinely tested).

**Bioactivity-ELISA of
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Immobilized Human PD-L1, His Tag (HPLC-verified) at series of concentration on MonRab™ Anti-His Tag (C-term) Antibody precoated (0.1 µg/well) plate, can bind Human PD-1, Mouse IgG2a Fc Tag (HPLC-verified) at 5 µg/mL (100 µL/well) with a linear range of 10-78 ng/mL (Routinely tested).

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