

## Recombinant Cynomolgus PDCD1 protein, His-tagged

**Cat. No.** PDCD1-5223C    **Lot. No.** (See product label)

### SPECIFICATION

|                         |  |
|-------------------------|--|
| <b>Product Overview</b> | Recombinant Cynomolgus PDCD1 protein (Leu25-Gln167), fused to His tag at C-terminus, was expressed in human 293 cells (HEK293).  |
| <b>Species</b>          | Cynomolgus   |
| <b>Source</b>           | HEK293   |
| <b>ProteinLength</b>    | 143  |
| <b>Description</b>      | 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- $\gamma$ . 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- $\gamma$ 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- $\gamma$ secretion. Monoclonal antibodies targeting PD-1 that boost the immune system are being developed for the treatment of cancer. |

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|                       |   |
|-----------------------|---|
| <b>Form</b>           | Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.  |
| <b>Molecular Mass</b> | The protein has a calculated MW of 16.8 kDa. The protein migrates as 35-45 kDa under reducing (R) condition (SDS-PAGE) due to different glycosylation.  |
| <b>Endotoxin</b>      | Less than 1.0 EU per ug by the LAL method.  |
| <b>Purity</b>         | >95% as determined by SDS-PAGE.   |
| <b>Storage</b>        | For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.<br>Please avoid repeated freeze-thaw cycles.<br>This product is stable after storage at:<br>-20 centigrade to -70 centigrade for 12 months in lyophilized state;<br>-70 centigrade for 3 months under sterile conditions after reconstitution. |
| <b>Reconstitution</b> | 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.   |

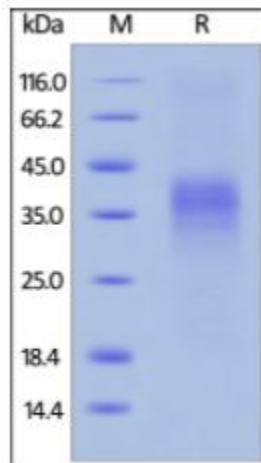
## GENE INFORMATION

|                        |  |
|------------------------|--|
| <b>Gene Name</b>       | PDCD1  |
| <b>Official Symbol</b> | PDCD1  |
| <b>Synonyms</b>        | CD279, PD-1, PD1, SLEB2, hPD-1, hPD-I, hSLE1 |
| <b>Gene ID</b>         | 102123659                                    |
| <b>mRNA Refseq</b>     | NM_001284136.1                               |

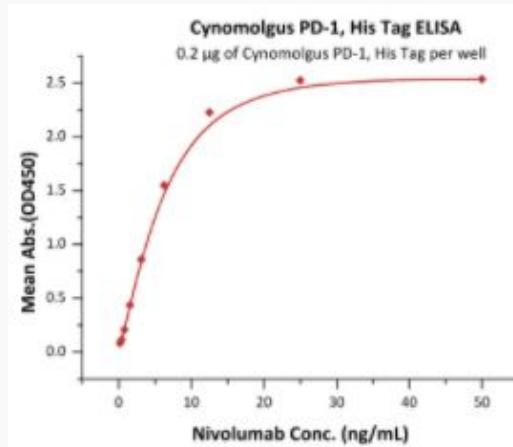
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**Protein Refseq**
**NP\_001271065.1**
**UniProt ID**
**B0LAJ3**
**SDS-PAGE of  
PDCD1-5223C**


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

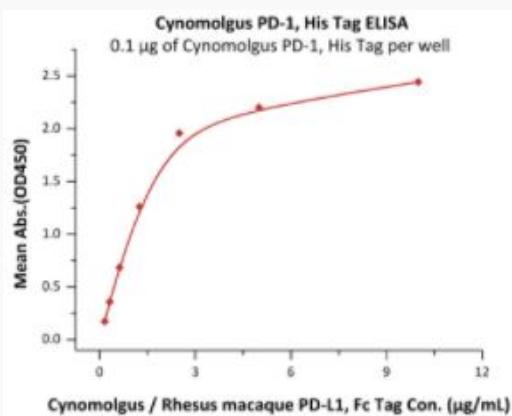
**Bioactivity-ELISA of  
PDCD1-5223C**

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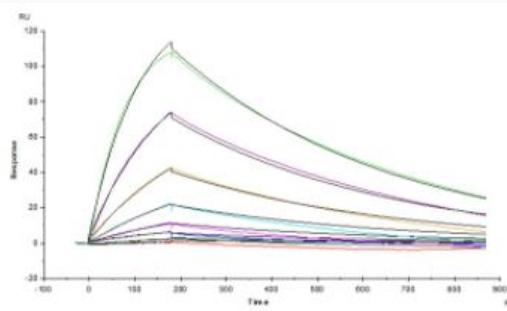
Immobilized Cynomolgus PD-1, His Tag at 2  $\mu$ g/mL (100  $\mu$ L/well) can bind Nivolumab with a linear range of 0.2-13 ng/mL (QC tested).

#### Bioactivity-ELISA of PDCD1-5223C



Immobilized Cynomolgus PD-1, His Tag at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Cynomolgus/Rhesus macaque PD-L1, Fc Tag with a linear range of 0.156-2.5  $\mu$ g/mL (Routinely tested).

#### Bioactivity-SPR of PDCD1-5223C

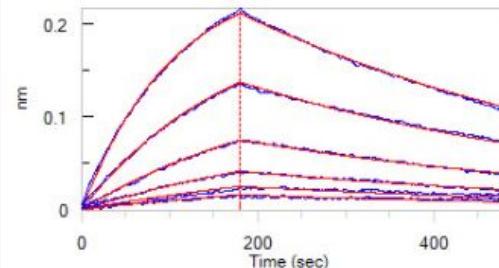


Opdivo (Nivolumab) captured on CM5 chip via anti-human IgG Fc antibodies surface, can bind Cynomolgus PD-1, His Tag with an affinity constant of 18.1 nM as determined in a SPR assay (Routinely tested).

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**Bioactivity-BLI of  
PDCD1-5223C**

Loaded Opdivo (Nivolumab) on Protein A Biosensor, can bind Cynomolgus PD-1, His Tag with an affinity constant of 17.5 nM as determined in BLI assay (Routinely tested).