



### Synonym

PDCD1,PD1,CD279,SLEB2

### Source

PE-Labeled Human PD-1, Fc,His Tag (Cat. No. PD1-HP2F2) is produced via site-specific conjugation of PE to Human PD-1, Fc,His Tag under optimal conditions with a proprietary technology. Human PD-1, Fc,His Tag is expressed from human 293 cells (HEK293). It contains AA Leu 25 - Gln 167 (Accession # [Q15116-1](#)).

Predicted N-terminus: Leu 25

### Molecular Characterization

|                                    |                                 |          |
|------------------------------------|---------------------------------|----------|
| PD-1(Leu 25 - Gln 167)<br>Q15116-1 | Fc(Pro 100 - Lys 330)<br>P01857 | Poly-his |
|------------------------------------|---------------------------------|----------|

This protein carries a human IgG1 Fc tag at the C-terminus, followed by a polyhistidine tag.

The protein has a calculated MW of 44.7 kDa.

### Conjugate

PE

Excitation Wavelength: 488 nm / 561 nm

Emission Wavelength: 575 nm

### Application

Flow Cytometry (Neutralizing assay), Please note that this product is NOT compatible to streptavidin detection system.

### Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, 0.5% BSA, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

### Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

### Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

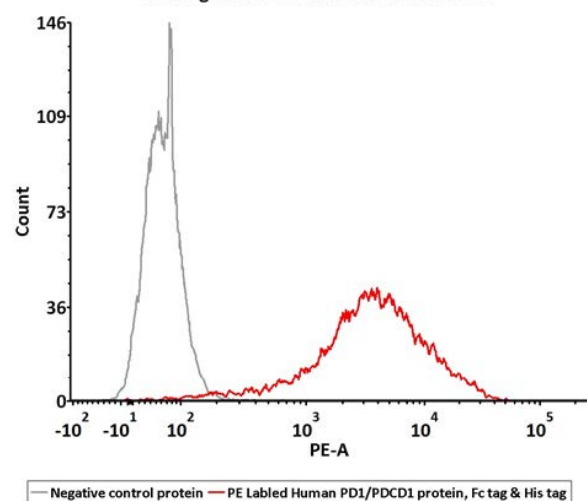
*Please protect from light and avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

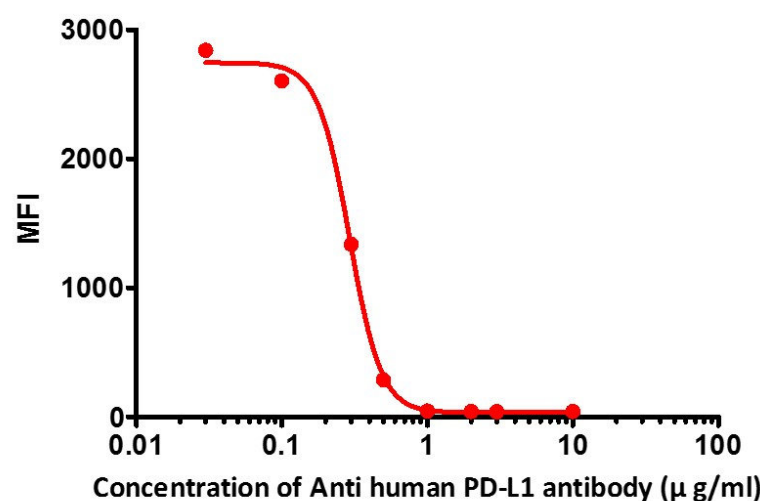
### Bioactivity-FACS

FACS analysis of PE Labeled Human PD1/PDCD1 Protein, Fc tag & His tag binding to 293T cell surface human PD-L1



Flow Cytometry assay shows that PE-Labeled Human PD-1, Fc,His Tag (Cat. No. PD1-HP2F2) can bind to 293T cells overexpressing human PD-L1. 1  $\mu$ L stock solution per million cells (QC tested).

### Neutralizing Anti-human PD-L1 antibody screening assay



FACS analysis shows that the binding of PE-Labeled Human PD-1, Fc,His Tag (Cat. No. PD1-HP2F2) to 293T overexpressing PD-L1 was inhibited by increasing concentration of neutralizing anti-human PD-L1 antibody. The IC50 is 0.29  $\mu$ g/mL (QC tested).

Discounts, Gifts,  
and more!





## 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- $\gamma$ . 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.

## Clinical and Translational Updates

Discounts, Gifts,  
and more!

