

### **Synonym**

PDCD1,PD1,CD279,SLEB2

### Source

Rabbit PD-1, Fc Tag(PD1-RB5251) is expressed from human 293 cells (HEK293). It contains AA Leu 25 - Gln 167 (Accession # G1SUF0). Predicted N-terminus: Leu 25

# **Molecular Characterization**

PD-1(Leu 25 - Gln 167) Fc(Pro 100 - Lys 330)
G1SUF0 P01857

This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 42.6 kDa. The protein migrates as 55-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

#### **Endotoxin**

Less than 1.0 EU per µg by the LAL method.

### **Purity**

>95% as determined by SDS-PAGE.

#### **Formulation**

Lyophilized from 0.22 µm filtered solution in

Tris with Glycine, Arginine and NaCl, pH7.5 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

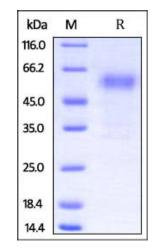
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please 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.

# **SDS-PAGE**

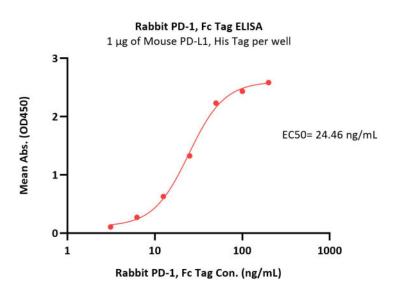


Rabbit PD-1, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

### **Bioactivity-ELISA**







Immobilized Mouse PD-L1, His Tag (Cat. No. PD1-M5220) at 10  $\mu$ g/mL (100  $\mu$ L/well) can bind Rabbit PD-1, Fc Tag (Cat. No. PD1-RB5251) with a linear range of 3-50 ng/mL (QC tested).

### 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 P13K/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.

# **Clinical and Translational Updates**

