Data Sheet (Cat.No.TMPY-00250)

PD-1 Protein, Rhesus, Recombinant (His)

General Information

Synonyms:	programmed cell death 1
Protein Construction:	A DNA sequence encoding the rhesus PD1 (NP_001107830.1) (Met1-Gln167) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	Rhesus
Expression Host:	HEK293 Cells
Accession:	B0LAJ2
Molecular Weight:	20.3 kDa (predicted)

QC Testing

Biological Activity:	1. Immobilized Rhesus PD-1 His at 2 μg/ml (100 μl/well) can bind Human PD-L1 hFc , the EC50 is 50-250 ng/mL. 2. Immobilized Rhesus PD-1 His at 2 μg/ml (100 μl/well) can bind PD-L2 Protein, Human, Recombinant (ECD, hFc Tag), Biotinylated , the EC50 is 15-80 ng/mL. 3. Immobilized Rhesus PD-1 His at 2 μg/ml (100 μl/well) can bind Anti-PD1(MDX)-IgG4 Antibody (Nivolumab), the EC50 is 8-52 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Programmed cell death 1, also known as PDCD1, is a type I transmembrane glycoprotein, and is an immunoreceptor belonging to the CD28/CTLA-4 family negatively regulates antigen receptor signaling by recruiting protein tyrosine phosphatase, SHP-2 upon interacting with either of two ligands, PD-L1 or PD-L2. 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. PD1 has been suggested to be involved in lymphocyte clonal selection and peripheral tolerance, and thus contributes to the prevention of autoimmune diseases. Furthermore, PD1 is shown to be a regulator of virus-specific CD8+ T cell survival in HIV infection. As a cell surface molecule, PDCD1 regulates the adaptive immune response. Engagement of PD-1 by its ligands PD-L1 or PD-L2 transduces a signal that inhibits T-cell proliferation, cytokine production, and cytolytic function.Cancer ImmunotherapyCo-inhibitory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint Blockade: Blocking AntibodiImmune Checkpoint Blockade: PD1 / PDCD1 / CD2Immune Checkpoint Detection: AntibodiesImmune Checkpoint Detection: ELISA AntibodiesImmune Checkpoint Detection: IHC AntibodiesImmune Checkpoint Detection: WB AntibodiesImmune Checkpoint ProteinsImmune Checkpoint TargetsImmunotherapyPD1 / PDCD1 / CD279 Immune CheckpointPD1 / PDCD1 / CD279 Immune Checkpoint AntibodPD1 / PDCD1 / CD279 Immune Checkpoint ProteinTargeted Therapy

Reference

James ES, et al. (2005) PDCD1: a tissue-specific susceptibility locus for inherited inflammatory disorders. Genes Immun. 6(5): 430-7.
Okazaki T, et al. (2007) PD-1 and PD-1 ligands: from discovery to clinical application. Int Immunol. 19(7): 813-24.
del Rio ML, et al. (2008) PD-1/PD-L1, PD-1/PD-L2, and other co-inhibitory signaling pathways in transplantation. Transpl Int. 21(11): 1015-28.
Riley JL.(2009) PD-1 signaling in primary T cells. Immunol Rev. 229(1): 114-25.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481