Data Sheet (Cat.No.TMPY-06682)

TargetMol

PD-1 Protein, Human, Recombinant (Asp26-Pro39 deletion, His)

General Information

Synonyms:	hPD-1;hSLE1;hPD-l;CD279;PD1;PD-1;programmed cell death 1;SLEB2
Protein Construction:	A DNA sequence encoding the Human PDCD1 (NP_005009.2) (Met1-Gln167,Asp26-Pro39 deletion) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 40
Species:	Human
Expression Host:	HEK293 Cells
Accession:	NP_005009.2
Molecular Weight:	18.65 kDa (predicted); 37.91 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
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

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