

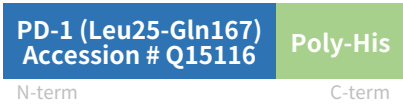
Rev03
Update: Dec,14,2021

DATASHEET

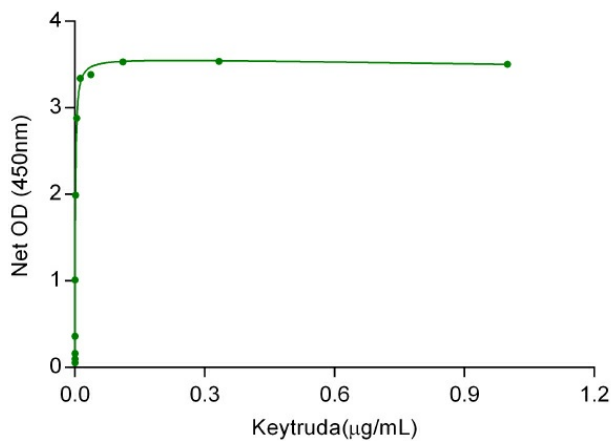
PD-1, His, Human

Cat. No.: Z03424

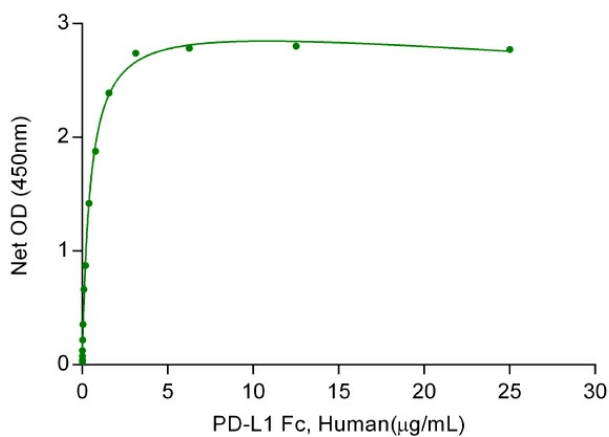
Product Introduction

Species	Human
Protein Construction	
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	< 0.2 EU/μg of protein by gel clotting method
Biological Activity	Immobilized PD-1,His, Human at 2.0 μg/ml can bind PD-L1 Fc Chimera, Human (Cat. No.: Z03371).Immobilized PD-1,His, Human at 0.5 μg/ml can bind Keytruda.
Expression System	HEK 293
Apparent Molecular Weight	30~40 kDa, on SDS-PAGE under reducing conditions.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS, 5% trehalose and mannitol.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH ₂ O or PBS up to 100 μg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Examples



Immobilized PD-1,His, Human at 0.5 µg/mL can bind Keytruda(Merck) with a linear range of 0.017~1.37ng/mL.



Immobilized PD-1,His, Human at 2 µg/mL can bind PD-L1 Fc Chimera, Human(Cat.No.Z03371) with a linear range of 24-390ng/mL.

Background

Target Background : Programmed death (PD-1) is an immunoinhibitory receptor that belongs to the CD28 family and is expressed on T cells, B cells, monocytes, natural killer cells, and many tumor-infiltrating lymphocytes (TILs); PD-1 is a type I membrane protein of 268 amino acids and which structure includes an extracellular IgV domain followed by a transmembrane region and an intracellular tail. The intracellular tail contains two phosphorylation sites located in an immunoreceptor tyrosine-based inhibitory motif and an immunoreceptor tyrosine-based switch motif, which suggests that PD-1 negatively regulates TCR signals. This is consistent with binding of SHP-1 and SHP-2 phosphatases to the cytoplasmic tail of PD-1 upon ligand binding. It has 2 ligands that have been described PD-L1(B7H1) and PD-L2(B7-DC); PD-1 induction on activated T cells occurs in response to PD-L1 or L2 engagement and limits effector T-cell activity in peripheral organs and tissues during inflammation, thus preventing autoimmunity. Recombinant Human PD-1 produced in HEK293 cells is a polypeptide chain containing 149 amino acids with C-terminal 6×His. A fully biologically active molecule, rhPD-1 has a molecular mass of 30-40 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Synonyms : PD-1; CD279; PDCD1; Programmed cell death 1

For laboratory research use only. Direct human use, including taking orally and injection and clinical use are forbidden.