

# Human PD-1/PDCD1 Protein

Cat. No. PD1-HM601

## Description

|                         |  |
|-------------------------|--|
| <b>Source</b>           | Recombinant Human PD-1/PDCD1 Protein is expressed from HEK293 with Llma IgG2b Fc tag at the C-terminus.<br>It contains Leu25-Gln167. |
| <b>Accession</b>        | Q15116-1   |
| <b>Molecular Weight</b> | The protein has a predicted MW of 43.26 kDa. Due to glycosylation, the protein migrates to 65-80 kDa based on Bis-Tris PAGE result.  |
| <b>Endotoxin</b>        | Less than 0.1 EU per $\mu\text{g}$ by the LAL method.  |
| <b>Purity</b>           | > 95% as determined by Bis-Tris PAGE<br>> 95% as determined by HPLC  |

## Formulation and Storage

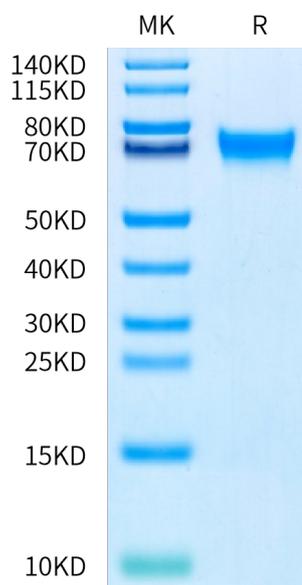
|                       |   |
|-----------------------|---|
| <b>Formulation</b>    | Lyophilized from 0.22 $\mu\text{m}$ filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.  |
| <b>Reconstitution</b> | Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.   |
| <b>Storage</b>        | -20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles. |

## Background

Programmed Death-1 receptor (PD-1), also known as CD279, is type I transmembrane protein belonging to the CD28 family of immune regulatory receptors. PD1 is an inhibitory receptor on antigen activated T-cells that plays a critical role in induction and maintenance of immune tolerance to self. Delivers inhibitory signals upon binding to ligands CD274/PDCD1L1 and CD273/PDCD1LG2 (PubMed:21276005). Following T-cell receptor (TCR) engagement, PDCD1 associates with CD3-TCR in the immunological synapse and directly inhibits T-cell activation.

## Assay Data

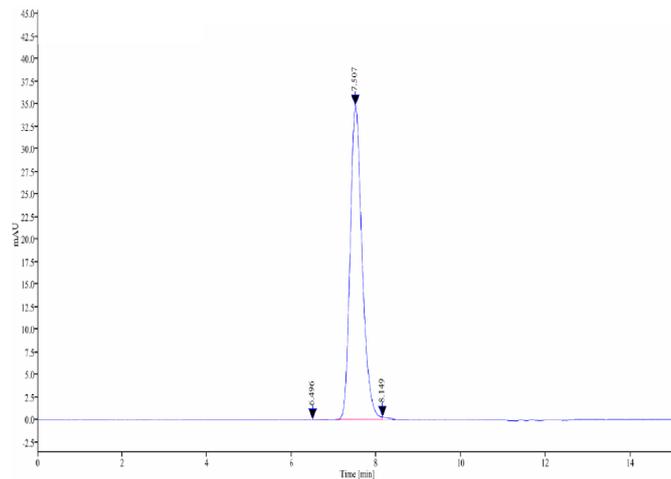
### Bis-Tris PAGE



Human PD-1 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

Assay Data

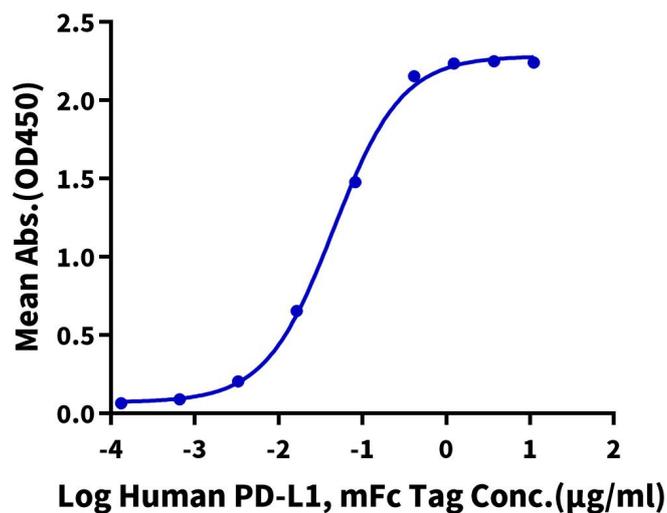


The purity of Human PD-1 is greater than 95% as determined by SEC-HPLC.

ELISA Data

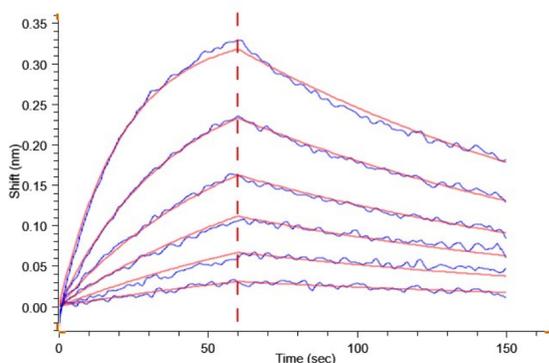
**Human PD-1, Llama Fc Tag ELISA**

0.1µg Human PD-1, Llama Fc Tag Per Well



Immobilized Human PD-1, Llama Fc Tag at 1µg/ml(100µl/well) on the plate. Dose response curve for Human PD-L1, mFc Tag with the EC50 of 45.2ng/ml determined by ELISA.

BLI Data



Loaded Biotinylated Human PD-L2, His Tag on Anti-His-Biosensor can bind Human PD-1, Llama IgG2b Fc Tag with an affinity constant of 16.3 nM as determined in BLI assay .