

## Product datasheet

# Recombinant human PD1 protein (Active) ab174035

[2 References](#) [10 Images](#)

### Description

<b>Product name</b>	Recombinant human PD1 protein (Active)	
<b>Biological activity</b>	Measured by its binding ability in a functional ELISA.  Immobilized PD1 at 10 µg/ml (100 µl/well) can bind recombinant Human B7-H1 Fc chimera with a linear range of 0.005- 0.4 µg/ml.	
<b>Purity</b>	> 95 % SDS-PAGE. >90% as determined by SEC-HPLC. Purified by Immobilized metal affinity chromatography.	
<b>Endotoxin level</b>	< 1.000 Eu/µg	
<b>Expression system</b>	HEK 293 cells	
<b>Accession</b>	<b><u>Q15116</u></b>	
<b>Protein length</b>	Protein fragment	
<b>Animal free</b>	No	
<b>Nature</b>	Recombinant	
<b>Species</b>	Human	
<b>Sequence</b>	LDSPDRPWNPTTFSPALLVVTEGDNATFTCSFSNTSESF VLNWYRMSPSN QTDKLAAFPEDRSQPGQDCRFRVTQLPNGRDFHMSVVR ARRNDSGTYLCG AISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAG QFQ	
<b>Predicted molecular weight</b>	17 kDa including tags	
<b>Amino acids</b>	25 to 167	
<b>Tags</b>	His tag C-Terminus	
<b>Additional sequence information</b>	(NP_005009.2)	

### Specifications

Our **Abpromise guarantee** covers the use of **ab174035** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	HPLC
	SDS-PAGE

Functional Studies

ELISA

**Form**

Lyophilized

**Additional notes**

For long term storage, store at lyophilized state at -20°C or lower. After reconstitution, store under sterile conditions for 3 months at -70°C or 12 months at 4-8°C at lyophilized state. Avoid repeated freeze-thaw cycles.

**Preparation and Storage**

---

**Stability and Storage**

Shipped at 4°C. Store at 4°C prior to reconstitution. Store at -20°C or -80°C. Please see notes section.

pH: 7.40

Constituents: PBS, 5% Trehalose

The formulation is lot specific. Please contact our Technical Support team for details

This product is an active protein and may elicit a biological response in vivo, handle with caution.

**Reconstitution**

This information is lot specific. Please contact our Technical Support team for details

**General Info**

---

**Function**

Possible cell death inducer, in association with other factors.

**Involvement in disease**

Genetic variation in PDCD1 is associated with susceptibility to systemic lupus erythematosus type 2 (SLEB2) [MIM:605218]. Systemic lupus erythematosus is a chronic, inflammatory and often febrile multisystemic disorder of connective tissue. It affects principally the skin, joints, kidneys and serosal membranes. It is thought to represent a failure of the regulatory mechanisms of the autoimmune system.

**Sequence similarities**

Contains 1 Ig-like V-type (immunoglobulin-like) domain.

**Developmental stage**

Induced at programmed cell death.

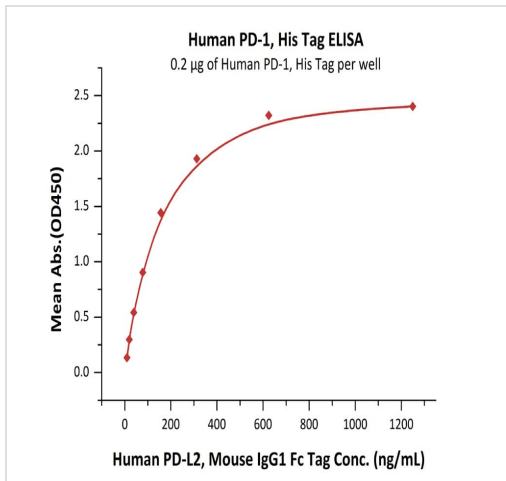
**Cellular localization**

Membrane.

---

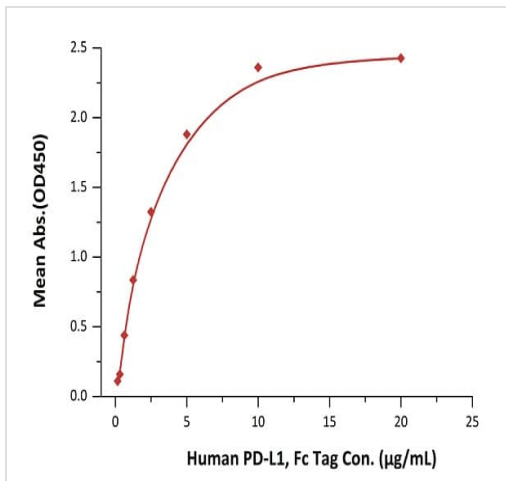
**Images**

---



Immobilized ab174035 at 2 µg/mL (100 µL/well) can bind Human PD-L2, Mouse IgG1 Fc Tag with a linear range of 10-156 ng/mL.

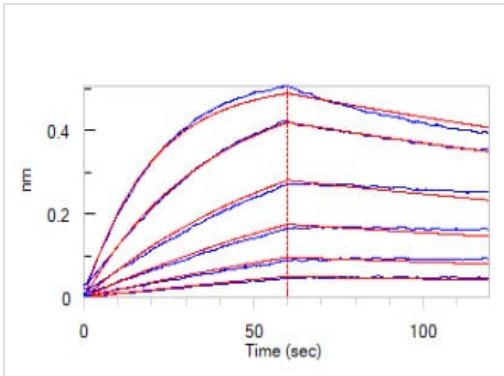
ELISA - Recombinant human PD1 protein (Active)  
(ab174035)



Immobilized ab174035 at 0.2µg/mL (100 µL/well) binds Human PD-L1, Fc Tag.

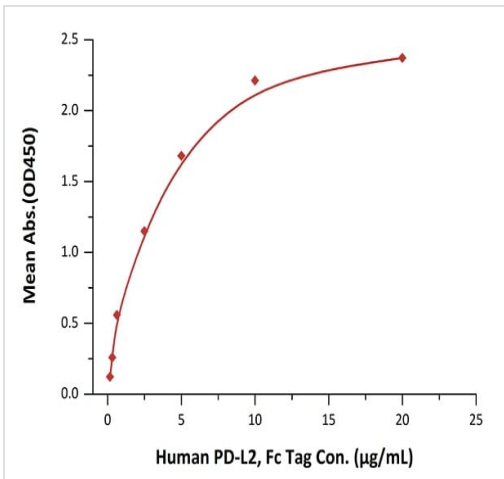
Linear range of 0.31-1.25 µg/mL (QC tested).

Functional Studies - Recombinant human PD1  
protein (ab174035)



Functional Studies - Recombinant human PD1 protein (Active) (ab174035)

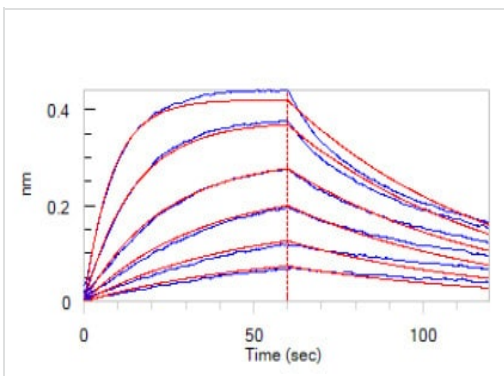
Loaded Human PD-1 (His Tag) (HPLC verified) on HIS1K Biosensor can bind Human PD-L2 (Fc Tag) (HPLC verified) with an affinity constant of 16.3 nM as determined in bli assay (ForteBio Octet Red96e) (QC tested).



Functional Studies - Recombinant human PD1 protein (ab174035)

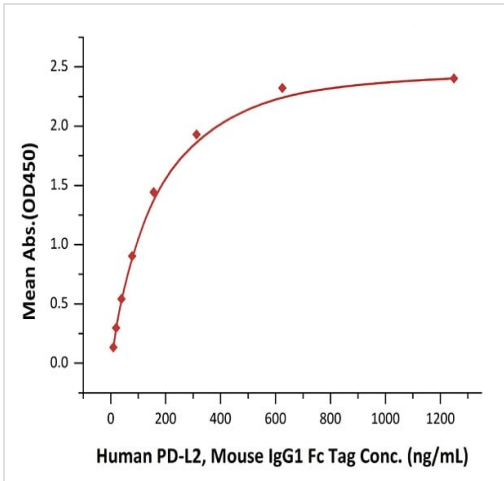
Immobilized ab174035 at 0.2 µg/mL ( 100 µl/well ) binds Human PD-L2, Fc Tag.

Linear range of 0.16-2.5 µg/mL (QC tested).



Functional Studies - Recombinant human PD1 protein (Active) (ab174035)

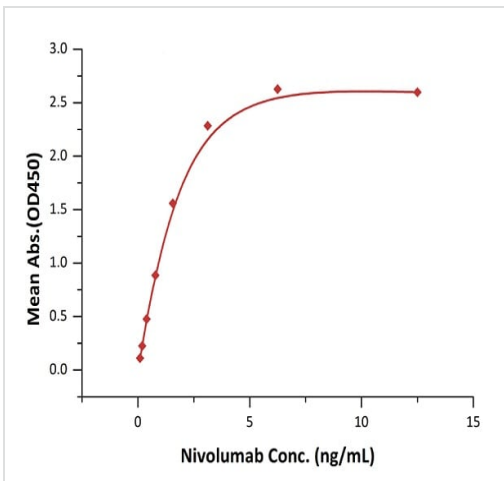
Loaded Human PD-1 (His Tag) (HPLC verified) on HIS1K Biosensor can bind Human PD-L1 (Fc Tag) (HPLC verified) with an affinity constant of 38.9 nM as determined in bli assay (ForteBio Octet Red96e) (QC tested).



Immobilized ab174035 at 2 µg/mL (100 µL/well) binds Human PD-L2, Mouse IgG1 Fc Tag.

Linear range of 10-156 ng/mL (Routinely tested).

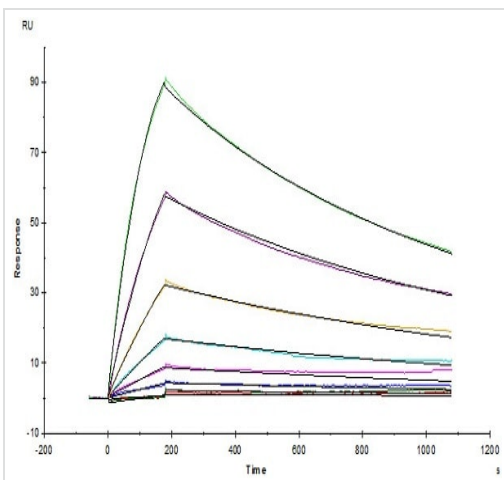
Functional Studies - Recombinant human PD1 protein (ab174035)



Immobilized ab174035 at 2 µg/mL (100 µL/well) binds Nivolumab.

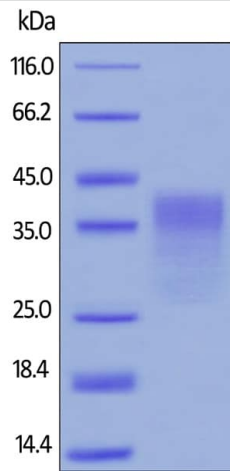
Linear range of 0.1-3 ng/mL (Routinely tested).

Functional Studies - Recombinant human PD1 protein (ab174035)



Opdivo(Nivolumab), captured on CM5 chip via anti-human IgG Fc antibodies surface, binds ab174035 with an affinity constant of 4.94 nM, as determined in an SPR assay (Biacore T200) (Routinely tested).

Functional Studies - Recombinant human PD1 protein (ab174035)

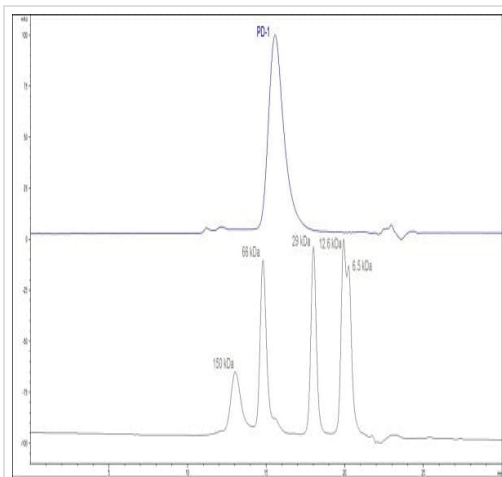


SDS-PAGE - Recombinant human PD1 protein  
(ab174035)

Reduced ab174035 on SDS-PAGE, stained overnight with Coomassie Blue.

The purity of the protein is greater than 95%.

The protein migrates as 31-44kDa under reducing conditions, due to glycosylation.



HPLC - Recombinant human PD1 protein  
(ab174035)

The purity of ab174035 was greater than 90%, as determined by SEC-HPLC.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors