

## Product datasheet

# Human PD-L1 ELISA Kit [28-8] ab277712

Recombinant SimpleStep ELISA

[7 Images](#)

### Overview

**Product name** Human PD-L1 ELISA Kit [28-8]

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Supernatant	8			2.7%

Inter-assay

Sample	n	Mean	SD	CV%
Supernatant	3			4.3%

**Sample type**

Cell culture supernatant, Urine, Serum, Cell Lysate, Hep Plasma, EDTA Plasma, Cit plasma

**Assay type**

Sandwich (quantitative)

**Sensitivity**

3.75 pg/ml

**Range**

7.81 pg/ml - 500 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	93	82% - 100%
Urine	93	86% - 97%
Serum	96	94% - 97%
Cell culture extracts	102	99% - 106%
Hep Plasma	101	90% - 111%
EDTA Plasma	90	89% - 92%

Sample type	Average %	Range
Cit plasma	90	87% - 95%

**Assay time**

1h 30m

**Assay duration**

One step assay

**Species reactivity**

**Reacts with:** Human

**Product overview**

Human PD-L1 ELISA kit [28-8] (ab277712) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Human PD-L1 protein in human serum, plasma, cell culture supernatant, urine, and cell extract samples. It uses our proprietary SimpleStep ELISA® technology and our recombinant PD-L1 antibody clone [28-8]. Quantitate Human PD-L1 with 3.75 pg/mL sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

**Notes**

PD-L1 (also known as CD274 or B7-H1) is a membrane bound glycoprotein involved in regulation of the immune system. PD-L1 is expressed on a variety of inflammatory-activated cells as well as some carcinomas and in melanoma. PD-L1 binds to PD-1 and CD80, where it can suppress T cell activation and proliferation as well as induce apoptosis. Levels of PD-L1 are increased in the plasma of cancer patients as well as in cerebrospinal fluid of gliomas. PD-L1 can bind PD-1 in order to regulate T cell apoptosis.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

**Platform**

Pre-coated microplate (12 x 8 well strips)

**Properties**

**Storage instructions**

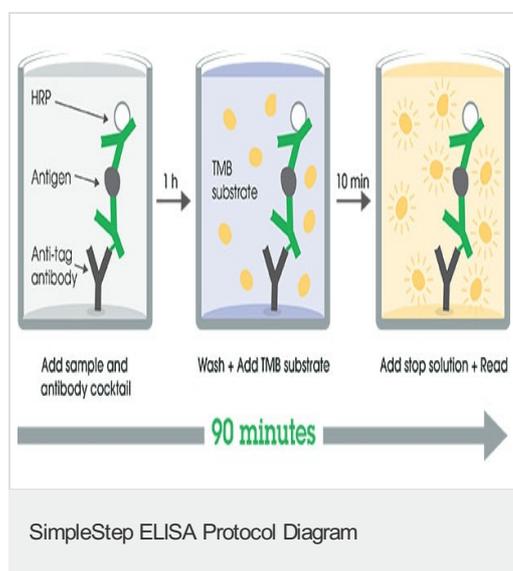
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human PD-L1 [28-8] Capture Antibody	1 x 600µl

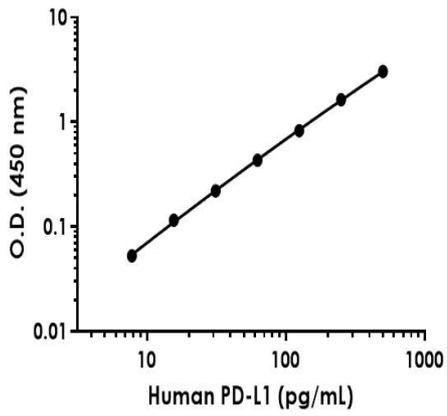
Components	1 x 96 tests
10X Human PD-L1 [28-8] Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml
Human PD-L1 [28-8] Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

<b>Function</b>	Involved in the costimulatory signal, essential for T-cell proliferation and production of IL10 and IFNG, in an IL2-dependent and a PDCD1-independent manner. Interaction with PDCD1 inhibits T-cell proliferation and cytokine production.
<b>Tissue specificity</b>	Highly expressed in the heart, skeletal muscle, placenta and lung. Weakly expressed in the thymus, spleen, kidney and liver. Expressed on activated T- and B-cells, dendritic cells, keratinocytes and monocytes.
<b>Sequence similarities</b>	Belongs to the immunoglobulin superfamily. BTN/MOG family. Contains 1 Ig-like C2-type (immunoglobulin-like) domain. Contains 1 Ig-like V-type (immunoglobulin-like) domain.
<b>Cellular localization</b>	Cell membrane and Endomembrane system.

## Images

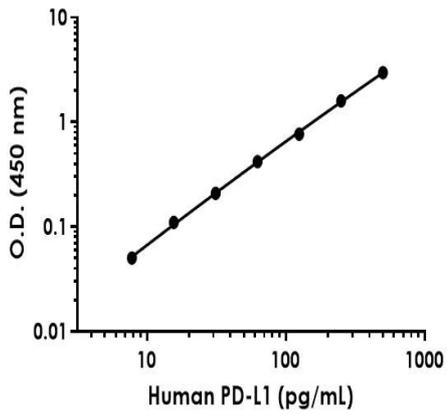


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



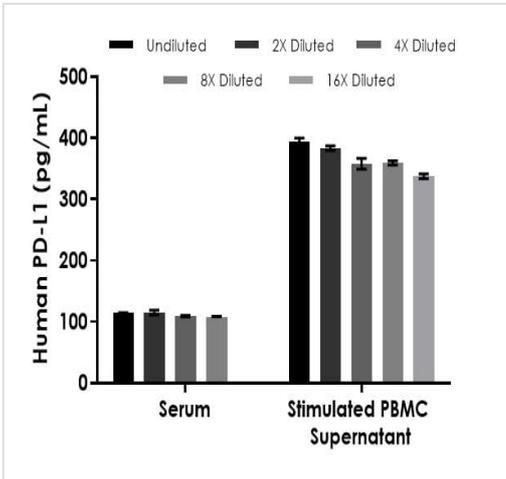
Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Example of human PD-L1 standard curve in Sample Diluent NS. The PD-L1 standard curve was prepared as described in Section 10.



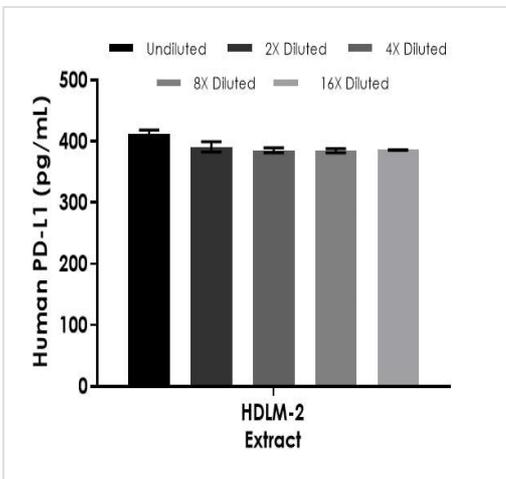
Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Example of human PD-L1 standard curve in 1X Cell Extraction Buffer PTR. The PD-L1 standard curve was prepared as described in Section 10.



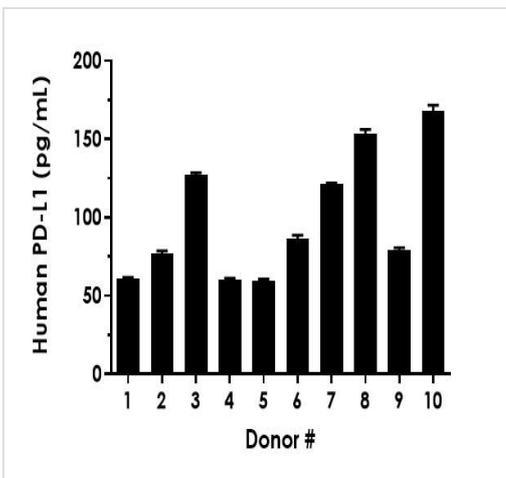
. Interpolated concentrations

Undiluted samples are as follows: serum 95% and PBMC supernatant 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PD-L1 concentration was determined to be 111.81 pg/mL in serum and 361.74 pg/mL in stimulated PBMC supernatant.



Interpolated concentrations of native PD-L1 in human HDLM-2 cell extract based on a 10 µg/mL extract load.

The concentrations of PD-L1 were measured in duplicate and interpolated from the PD-L1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PD-L1 concentration was determined to be 393.85 pg/mL in HDLM-2 extract.



Serum from ten individual healthy human male donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PD-L1 concentration was determined to be 99.45 pg/mL with a range of 59.76 – 168.01 pg/mL.

Powered by recombinant antibodies

**Research with confidence**  
Consistent and reproducible results

**Long-term and scalable supply**  
Recombinant technology

**Success from the first experiment**  
Confirmed specificity

**Ethical standards compliant**  
Animal-free production

Recombinant Antibody Benefits

To learn more about the advantages of recombinant antibodies see [here](#).

**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