

Recombinant Human CD274 protein, mouse IgG1 Fc-tagged, low endotoxin (HPLC-verified)

Cat. No. CD274-364H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CD274 Protein (19-238aa), was expressed in human 293 cells (HEK293) with C-terminal Mouse IgG1 Fc tag (low endotoxin, HPLC-verified).
Species	Human
Source	HEK293
ProteinLength	19-238 aa
Description	Programmed cell death 1 ligand 1 (PD-L1) is also known as cluster of differentiation (CD274) or B7 homolog 1 (B7-H1), is a member of the growing B7 family of immune molecules and is involved in the regulation of cellular and humoral immune responses. B7-H1 is a cell surface immunoglobulin superfamily with two Ig-like domains within the extracellular region and a short cytoplasmic domain. PD-L1 is highly expressed in the heart, skeletal muscle, placenta and lung and weakly expressed in the thymus, spleen, kidney and liver. PD-L1 is expressed on activated T-cells, B-cells, dendritic cells, keratinocytes and monocytes. PD-L1 is up-regulated on T- and B-cells, dendritic cells, keratinocytes and monocytes after LPS and IFNG activation and up-regulated in B-cells activated by surface Ig cross-linking. PD-L1 involve in the costimulatory signal, essential for T-cell proliferation and production of IL10 and IFNG, in an IL2-dependent and a PDCD1-independent manner.
Form	Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.

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Molecular Mass	The protein has a calculated MW of 51.6 kDa. The predicted N-terminus is Phe 19. As a result of glycosylation, the protein migrates as 65-85 kDa under reducing (R) condition, and 130-170 kDa under non-reducing (NR) condition (SDS-PAGE).
Endotoxin	Less than 0.1 EU per ug by the LAL method.
Purity	>92% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	CD274
Official Symbol	CD274
Synonyms	CD274; CD274 molecule; CD274 antigen , PDCD1LG1, programmed cell death 1 ligand 1; programmed cell death 1 ligand 1; B7 homolog 1; B7 H; B7 H1; B7H1; PD L1; PDL1; CD274 antigen; PDCD1 ligand 1; programmed death ligand 1; B7-H; PD-L1; PDCD1L1; PDCD1LG1; MGC142294; MGC142296
Gene ID	29126

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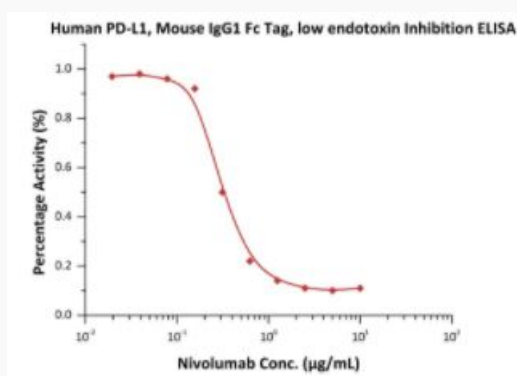
mRNA Refseq [NM_014143](#)

Protein Refseq [NP_054862](#)

MIM [605402](#)

UniProt ID [Q9NZQ7](#)

Bioactivity-ELISA of CD274-364H



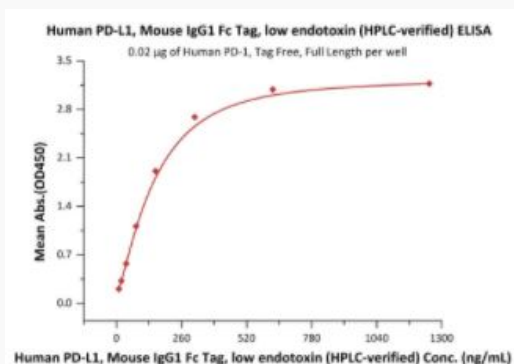
Immobilized Human PD-1, Tag Free at 0.2 µg/mL (100 µL/well) can bind pre-mixed increasing concentrations of Nivolumab and 1 µg/mL (100 µL/well) Human PD-L1, Mouse IgG1 Fc Tag, low endotoxin (HPLC-verified) with a half maximal inhibitory concentration (IC₅₀) of 0.30 µg/mL (QC tested).

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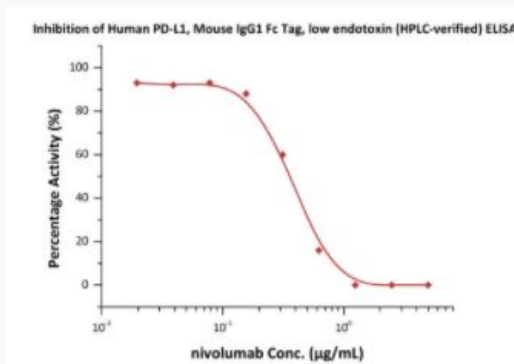
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Bioactivity-ELISA of CD274-364H



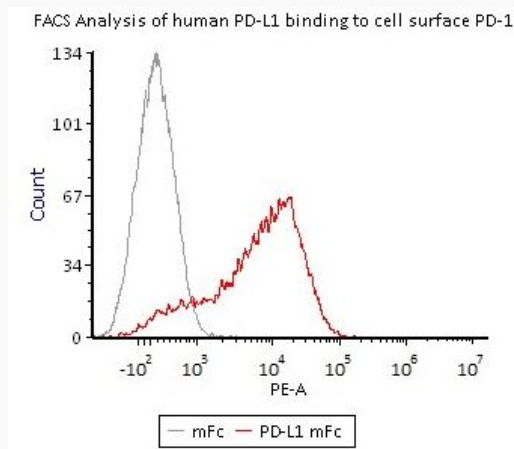
Immobilized Human PD-1, Tag Free, Full Length at 0.2 µg/mL (100 µL/well) can bind Human PD-L1, Mouse IgG1 Fc Tag, low endotoxin (HPLC-verified) with a linear range of 5-156 ng/mL (Routinely tested).

Bioactivity-ELISA of CD274-364H



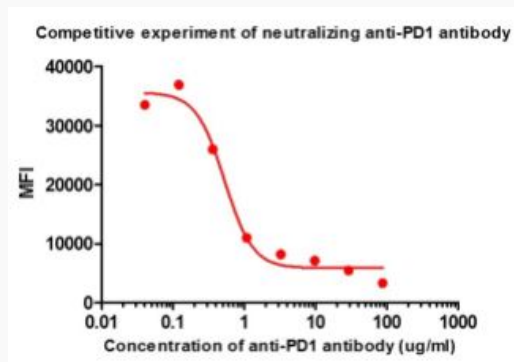
Serial dilutions of nivolumab were added into Human PD-L1, Mouse IgG1 Fc Tag, low endotoxin (HPLC-verified) : Biotinylated Human PD-1, Fc,Avitag binding reactions. The half maximal inhibitory concentration (IC₅₀) is 0.3789 µg/mL (Routinely tested).

Bioactivity-FACS of CD274-364H



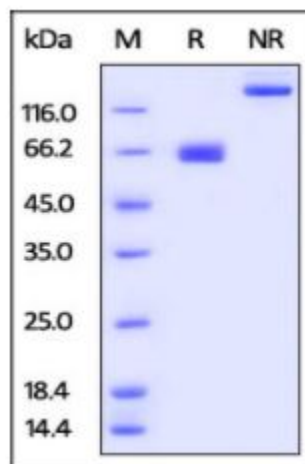
Flow Cytometry assay shows that Human PD-L1, Mouse IgG1 Fc Tag, low endotoxin (HPLC-verified) can bind to 293 cell overexpressing human PD-1. The concentration of PD-L1 used is 0.1 $\mu\text{g/mL}$ (Routinely tested).

Bioactivity-FACS of CD274-364H



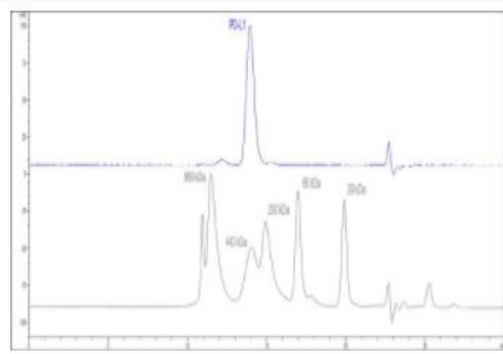
FACS analysis shows that the binding of Human PD-L1, Mouse IgG1 Fc Tag, low endotoxin (HPLC-verified) to 293 overexpressing PD-1 was inhibited by increasing concentration of neutralizing Anti-PD-1 antibody. The concentration of PD-L1 used is 1 $\mu\text{g/mL}$. The IC_{50} is 0.145 $\mu\text{g/mL}$ (Routinely tested).

SDS-PAGE of CD274-364H



Human PD-L1, Mouse IgG1 Fc Tag, low endotoxin (HPLC-verified) on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 92%.

SEC-HPLC of CD274-364H



The purity of Human PD-L1, Mouse IgG1 Fc Tag, low endotoxin (HPLC-verified) was more than 90% as determined by SEC-HPLC.

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