

## PD-L2 Protein, Human, Recombinant (His & Avi), Biotinylated

### General Information

Synonyms:	bA574F11.2;programmed cell death 1 ligand 2;Btdc;PD-L2;PDL2;B7DC;PDCD1L2;CD273;B7-DC
Protein Construction:	A DNA sequence encoding the human PDCD1LG2 (NP_079515.2) (Met1-Pro219) was expressed with a c-terminal polyhistidine tagged AVI tag at the C-terminus. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed. Predicted N terminal: Leu 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BQ51-1
Molecular Weight:	25.8 kDa (predicted)

### QC Testing

Biological Activity:	Immobilized Human PD-1 His & hFc at 2 µg/mL (100 µL/well) can bind Human PD-L2 (ECD, His & AVI Tag), Biotinylated, the EC50 is 800-2400 ng/mL.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Programmed death ligand 2 (PD-L2), also referred to as B7-DC and CD273, is a member of the B7 family of proteins including B7-1, B7-2, B7-H2, B7-H1 (PD-L1), and B7-H3. PD-L2 is a type I membrane protein and

structurally consists of an extracellular region containing one V-like and one C-like Ig domain, a transmembrane region, and a short cytoplasmic domain. PD-L2 is expressed on antigen presenting cells, placental endothelium and medullary thymic epithelial cells, and can be induced by LPS in B cells, INF- $\gamma$ ; in monocytes, or LPS plus IFN- $\gamma$ ; in dendritic cells. The CD28 and B7 protein families are critical regulators of immune responses. PD-L2 and PD-L1 are two ligands for PD-1, member of the CD28/CTLA4 family expressed on activated lymphoid cells, and thus provide signals for regulating T cell activation and immune tolerance. The interaction of B7-DC/PD-1 exhibited a 2-6-fold higher affinity compared with the interaction of B7-H1/PD-1. Cancer Immunotherapy Co-inhibitory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Detection: Antibodies Immune Checkpoint Detection: ELISA Antibodies Immune Checkpoint Detection: FCM Antibodies Immune Checkpoint Detection: WB Antibodies Immune Checkpoint Proteins Immune Checkpoint Targets Immunotherapy Targeted Therapy

### Reference

- Latchman Y, et al. (2001) PD-L2 is a second ligand for PD-1 and inhibits T cell activation. *Nat Immunol.* 2: 261-8.
- Carreno BM, et al. (2005) Therapeutic opportunities in the B7/CD28 family of ligands and receptors. *Curr Opin Pharmacol.* 5(4): 424-30.
- Radhakrishnan S, et al. (2007) B7-DC/PD-L2 cross-linking induces NF- $\kappa$ B-dependent protection of dendritic cells from cell death. *J Immunol.* 178(3): 1426-32.

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