## **PRODUCT** INFORMATION



PD-L2 Extracellular Domain (human, recombinant)

Item No. 28379

### **Overview and Properties**

Synonyms:	B7-DC, CD273, PDCD1 Ligand 2, Programmed Cell Death 1 Ligand 2
Source:	Active recombinant human C-terminal His-tagged PD-L2 expressed in HEK293 cells
Amino Acids:	20-219
Molecular Weight:	24 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥98% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Bioactivity:	See figures for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

#### Images



SDS-PAGE Analysis of PD-L2 Extracellular Domain. This protein has a calculated molecular weight of 24 kDa. It has an apparent molecular weight of approximately 40-45 kDa by SDS-PAGE under reducing conditions due to glycosylation.



PD-L2 Extracellular Domain Binding in a Functional ELISA. Immobilized PD-L2 Extracellular Domain at 1  $\mu$ g/ml (100  $\mu$ l/well) can bind recombinant human PD1 with a linear range of 7.8-1,000 ng/ml.

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

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# PRODUCT INFORMATION



#### Description

Programmed cell death 1 ligand 2 (PD-L2), also known as B7-DC and CD273, is a B7 family protein that is involved in regulation and attenuation of the adaptive immune response  $^{1,2}$  It is a 273-amino acid type I transmembrane protein encoded by the PDCD1LG2 gene in humans and is comprised of a 221-amino acid extracellular domain consisting of a signal peptide, an IgV-like domain, and an IgC-like domain, a transmembrane domain, and a cytoplasmic domain.<sup>3,4</sup> PD-L2 is expressed in dendritic cells and macrophages and is induced by IL-4 and IFN-y.<sup>1</sup> Binding of PD-L2 to its receptor, programmed cell death protein 1 (PD-1), suppresses T cell proliferation and cytokine production.<sup>2</sup> PD-L2 is also expressed in a variety of tumor types, and elevated expression of PD-L2 in tumor tissue is associated with decreased overall survival in patients with hepatocellular carcinoma.<sup>5,6</sup> Cayman's PD-L2 Extracellular Domain (human, recombinant) protein can be used for ELISA and binding assay applications. This protein consists of 211 amino acids, has a calculated molecular weight of 24 kDa, an a predicted N-terminus of Leu20 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 40 to 45 kDa due to glycosylation.

#### References

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- Riley, J.L. PD-1 signaling in primary T cells. Immunol. Rev. 229(1), 114-125 (2009). 2.
- 3. Yao, Q., Fischer, K.P., Tyrrell, D.L., et al. The Pekin duck programmed death ligand-2: cDNA cloning, genomic structure, molecular characterization and expression analysis. Biochem. Biophys. Rep. 13, 116-122 (2018).
- 4. Keir, M.E., Butte, M.J., Freeman, G.J., et al. PD-1 and its ligands in tolerance and immunity. Annu. Rev. Immunol. 26, 677-704 (2008).
- 5. Yearley, J.H., Gibson, C., Yu, N., et al. PD-L2 expression in human tumors: Relevance to anti-PD-1 therapy in cancer. Clin. Cancer Res. 23(12), 3158-3167 (2017).
- 6. Jung, H.I., Jeong, D., Ji, S., et al. Overexpression of PD-L1 and PD-L2 is associated with poor prognosis in patients with hepatocellular carcinoma. Cancer Res. Treat. 49(1), 246-254 (2017).

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