

## PD-L1 Protein, Human (HEK293)

Cat. No.:	HY-P73361
Synonyms:	Programmed cell death 1 ligand 1; PD-L1; B7-H1; CD274; PDL1
Species:	Human
Source:	HEK293
Accession:	NP_054862.1 (F19-R238)
Gene ID:	29126
Molecular Weight:	Approximately 36 kDa

### PROPERTIES

AA Sequence	<pre> FTVTVPKDLV  VVEYGSNMTI  ECKFPVEKQL  DLAALIVYWE MEDKNI IQFV  HGEEDLKVQH  SSYRQRARLL  KDQLSLGNAA LQITDVKLQD  AGVYRCMISY  GGADYKRITV  KVNAPYNKIN QRILVVDPVT  SEHELTCAAE  GYPKAEVIWT  SSDHQVLSGK TTTTNSKREE  KLFNVTSTLR  INTTTNEIFY  CTFRRLDPEE NHTAELV IPE  LPLAHPNER           </pre>
Biological Activity	Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated CTLL $\kappa$ 2 mouse cytotoxic T cells. The ED <sub>50</sub> for this effect is 0.2191 $\mu$ g/ml in the presence of 10 $\mu$ g/mL anti-CD3, corresponding to a specific activity is 4.56 $\times$ 10 <sup>3</sup> units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of PBS, pH 7.4 (Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. ) or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	PD-L1 Protein assumes a critical role in both the induction and maintenance of immune tolerance to self, acting as a ligand for the inhibitory receptor PDCD1/PD-1 and thereby modulating the activation threshold of T-cells, ultimately limiting their effector response. Additionally, PD-L1 may function as a costimulatory molecule for T-cell subsets that predominantly
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produce interleukin-10 (IL10) through an as yet unidentified activating receptor. Beyond its role as an immune checkpoint, PD-L1 also acts as a transcription coactivator, translocating into the nucleus in response to hypoxia and interacting with phosphorylated STAT3 to promote the transcription of GSDMC, leading to pyroptosis. Exploited by tumors to attenuate anti-tumor immunity and escape immune system destruction, the PDCD1-mediated inhibitory pathway facilitated by PD-L1 interaction with PDCD1/PD-1 inhibits cytotoxic T lymphocytes (CTLs) effector function. Blocking the PDCD1-mediated pathway has shown promise in reversing exhausted T-cell phenotypes and normalizing anti-tumor responses, providing a rationale for cancer immunotherapy.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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