

## PD-L1 Protein, Human (HEK293)

<b>Cat. No.:</b>	HY-P73361
<b>Synonyms:</b>	Programmed cell death 1 ligand 1; PD-L1; B7-H1; CD274; PDL1
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	Q9NZQ7-1/NP_054862.1 (F19-R238)
<b>Gene ID:</b>	29126
<b>Molecular Weight:</b>	Approximately 31-38 kDa due to the glycosylation.

### PROPERTIES

<b>AA Sequence</b>	<pre> FTVTVPKDLV   VVEYGSNMTI   ECKFPVEKQL   DLAALIVYWE MEDKNI IQFV   HGEEDLKVQH   SSYRQRARLL   KDQLSLGNAA LQITDVKLQD   AGVYRCMISY   GGADYKRITV   KVNAPYNKIN QRILVVD PVT   SEHELTCQAE   GYPKAEVIWT   SSDHQVLSGK TTTTNSKREE   KLFNVTSTLR   INTTTNEIFY   CTFRRLDPEE NHTAELV IPE   LPLAHPNER           </pre>
<b>Biological Activity</b>	Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated CTLL-2 mouse cytotoxic T cells. The ED <sub>50</sub> for this effect is ≤0.2111 µg/ml in the presence of 10 µg/mL anti-CD3.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4 or PBS, pH 7.4, 8% trehalose.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years from date of receipt. 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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	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 produce interleukin-10 (IL10) through an as yet unidentified activating receptor. Beyond its role as an immune checkpoint,
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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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