Product Data Sheet

Proteins

Inhibitors

PD-L1 Protein, Human (Biotinylated, HEK293, Fc-Avi)

Cat. No.: HY-P70721

Synonyms: Programmed Cell Death 1 Ligand 1; PD-L1; PDCD1 ligand 1; Programmed death ligand 1; B7

homolog 1; B7-H1; CD274; B7H1; PDCD1L1; PDCD1LG1; PDL1

Human Species: Source: **HEK293**

Accession: Q9NZQ7 (F19-T239)

Gene ID: 29126 Molecular Weight: 70-95 kDa

PROPERTIES

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$\Lambda \Lambda$	Sec	IIIΔN	60

FTVTVPKDLY VVEYGSNMTI ECKFPVEKQL DLAALIVYWE MEDKNIIQFV HGEEDLKVQH SSYRQRARLL KDQLSLGNAA LQITDVKLQD AGVYRCMISY GGADYKRITV KVNAPYNKIN QRILVVDPVT SEHELTCQAE GYPKAEVIWT SSDHQVLSGK INTTTNEIFY TTTTNSKREE KLFNVTSTLR CTFRRLDPEE

LPLAHPPNER NHTAELVIPE

Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.

Endotoxin Level

<1 EU/µg, determined by LAL method.

Reconsititution

It is not recommended to reconstitute to a concentration less than $100 \, \mu g/mL$ in ddH_2O . For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

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 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 antitumor 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.

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

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