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

Cat. No.:	HY-P78192
Synonyms:	CD274; PDL1; PD-L1; PD-L1B7 homolog 1; B7-H; B7H1; B7-H1; PDCD1L1; PDCD1LG1
Species:	Human
Source:	HEK293
Accession:	Q9NZQ7 (F19-R238)
Gene ID:	29126
Molecular Weight:	35-45 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. When immobilized Anti-PD-L1 Antibody at 0.5 μg/ml (100 μl/Well), can bind Biotinylated Human PD-L1, His Tag and the EC_{50} is 2-3 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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 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.

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

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