



Recombinant Human Programmed cell death 1 ligand 1 (CD274), partial (Active)

Product Code	CSB-MP878942HU1
Relevance	Plays a critical role in induction and maintenance of immune tolerance to self (PubMed:11015443, PubMed:28813417, PubMed:28813410). As a ligand for the inhibitory receptor PDCD1/PD-1, modulates the activation threshold of T-cells and limits T-cell effector response (PubMed:11015443, PubMed:28813417, PubMed:28813410). Through a yet unknown activating receptor, may costimulate T-cell subsets that predominantly produce interleukin-10 (IL10) (PubMed:10581077) The PDCD1-mediated inhibitory pathway is exploited by tumors to attenuate anti-tumor immunity and escape destruction by the immune system, thereby facilitating tumor survival (PubMed:28813417, PubMed:28813410). The interaction with PDCD1/PD-1 inhibits cytotoxic T lymphocytes (CTLs) effector function (By similarity). The blockage of the PDCD1-mediated pathway results in the reversal of the exhausted T-cell phenotype and the normalization of the anti-tumor response, providing a rationale for cancer immunotherapy (By similarity).
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q9NZQ7
Storage Buffer	Lyophilized from a 0.2 µm filtered PBS, 6% Trehalose, pH 7.4
Product Type	Others
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized PD-L1 at 2 µg/ml can bind Anti- PD-L1 mouse monoclonal antibody(CSB-MA878942A1m,antigen from E.coli), the EC50 of human PD-L1 protein is 1.252-1.653 ng/mL.
Purity	Greater than 95% as determined by SDS-PAGE. Greater than 90% as determined by SEC-HPLC.
Sequence	FTVTVPKDLVVEYGSNMTIECKFPVEKQLDLAALIVWEMEDKNIIQFVHGEE DLKVQHSSYRQRARLLKDQLSLGNAALQITDVKLQDAGVYRCMISYGGADYK RITVKVNAPYNKINQRILVVDPTSEHELTCQAEGYPKAEVIWTSSDHQVLSGK TTTTNSKREEKLFNVTSTLRINTTTNEIFYCTFRRLDPEENHTAELVIPELPLAHP PNER
Research Area	Cancer
Source	Mammalian cell
Target Names	CD274
Expression Region	19-238aa



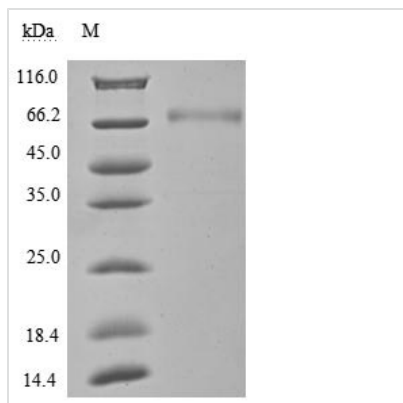
Notes Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Tag Info C-terminal hFc-tagged

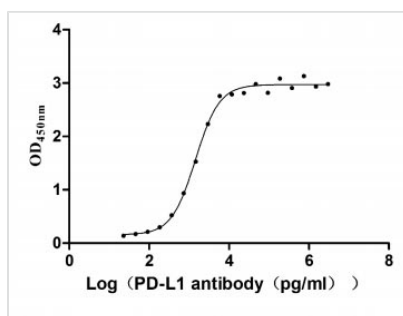
Mol. Weight 52.7 kDa

Protein Length Partial

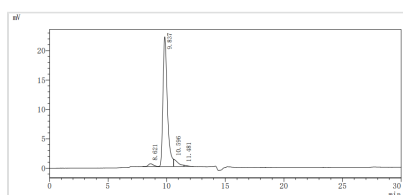
Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
Measured by its binding ability in a functional ELISA. Immobilized PD-L1 at 2 µg/ml can bind Anti- PD-L1 mouse monoclonal antibody(CSB-MA878942A1m,antigen from E.coli), the EC₅₀ of human PD-L1 protein is 1.252-1.653 ng/mL.



The purity of CD274 was greater than 90% as determined by SEC-HPLC.

Description

The Human Programmed cell death 1 ligand 1 (CD274) is a protein that participates in the adaptive immune response and the cell surface receptor pathway. This protein is the ligand for the inhibitory receptor PDCD1/PD-1 that regulates the activity of T-cells and limits their response. This recombinant protein is prepared by the expression of the 19-238aa region of the human CD274 in mammalian cells. It was fused on the C-terminus with a TEV linker and an immunoglobulin Fc domain tag for purification and immobilization purposes. The expressed protein has a molecular weight of 52.7 kDa. This product has a purity higher than 95%, as measured by SDS-PAGE. Its EC₅₀ for the binding with human PD-L1 protein determined by a functional ELISA is 1.252-1.653 ng/mL. The final product has low levels of endotoxin as determined by LAL method. This recombinant protein could be used in cancer research as its increased expression in tumors promotes immune evasion and tumor cell



growth by suppressing T-cell activity. Therefore, it becomes a target for the anti-PD-L1 pathway immunomodulation cancer therapy.

Endotoxin

Less than 1.0 EU/ug as determined by LAL method.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.

Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.