

Human PD-L1 / B7-H1 / CD274 Protein (Fc Tag)

Catalog Number: 10084-H02H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

B7-H; B7-H1; B7H1; PD-L1; PDCD1L1; PDCD1LG1; PDL1

Protein Construction:

A DNA sequence encoding the N-terminal segment (Met 1-Thr 239) of the extracellular domain of human B7-H1 (NP_054862.1) was expressed with C-terminal fused Fc region of human IgG1.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.

Bio Activity:

1. Immobilized Recombinant Human PD1 / PDCD1 Protein (His Tag) (Cat:10377-H08H) at 2 µg/mL (100 µL/well) can bind Recombinant Human PD-L1 / B7-H1 / CD274 Protein (Fc Tag) (Cat:10084-H02H), the EC₅₀ is 220-660 ng/mL.

2. Immobilized Recombinant Human PD-L1 / B7-H1 / CD274 Protein (Fc Tag) (Cat: 10084-H02H) at 2 µg/mL (100 µL/well) can bind Recombinant Human PD1 / PDCD1 Protein (Fc & AVI Tag), Biotinylated (Cat: 10377-H41H-B), the EC₅₀ is 6-18 ng/mL.

3. Loaded Recombinant Human PD-1 Protein, His tag (Cat. No. 10377-H08H) on His1K Biosensor, can bind Recombinant Human PD-L1/B7-H1 Protein, hFc Tag (Cat. No. 10084-H02H) with an affinity constant of 0.11 µM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).

4. CHO cells were transduced with human PD1 and subjected to flow cytometric analysis using recombinant human PDL1 protein (Fc tag) (left, Cat. No. 10084-H02H, red) and a negative control protein (blue). The cells were then stained with an FITC-conjugated anti-human IgG Fc antibody. Non-transduced CHO cells were used as a control (right).

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: Phe 19

Molecular Mass:

The recombinant mature human B7-H1/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 459 amino acids and predicts a molecular mass of 52 kDa. As a result of glycosylation, the human B7-H1/Fc monomer migrates as an approximately 65-70 kDa protein in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

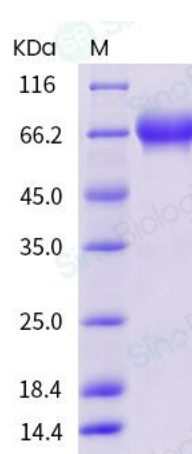
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Programmed death-1 ligand-1 (PD-L1, CD274, B7-H1) has been identified as the ligand for the immunoinhibitory receptor programmed death-1 (PD1/PDCD1) and has been demonstrated to play a role in the regulation of immune responses and peripheral tolerance. PD-L1/B7-H1 is a member of the growing B7 family of immune molecules and this protein contains one V-like and one C-like Ig domain within the extracellular domain, and together with PD-L2, are two ligands for PD1 which belongs to the CD28/CTLA4 family expressed on activated lymphoid cells. By binding to PD1 on activated T-cells and B-cells, PD-L1 may inhibit ongoing T-cell responses by inducing apoptosis and arresting cell-cycle progression. Accordingly, it leads to growth of immunogenic tumor growth by increasing apoptosis of antigen specific T cells and may contribute to immune evasion by cancers. PD-L1 thus is regarded as promising therapeutic target for human autoimmune disease and malignant cancers.

References

1. Iwai Y, et al. (2002) Involvement of PD-L1 on tumor cells in the escape from host immune system and tumor immunotherapy by PD-L1 blockade. Proc Natl Acad Sci U S A. 99(19): 12293-7.
2. Ghebeh H, et al. (2006) The B7-H1 (PD-L1) T lymphocyte-inhibitory molecule is expressed in breast cancer patients with infiltrating ductal carcinoma: correlation with important high-risk prognostic factors. Neoplasia. 8(3): 190-8.
3. Salih HR, et al. (2006) The role of leukemia-derived B7-H1 (PD-L1) in tumor-T-cell interactions in humans. Exp Hematol. 34(7): 888-94.