

# 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

### Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized human PD-1 at 10 µg/ml (100 µl/well) can bind recombinant human B7-H1 / PD-L1 / Fc chimera with a linear range of 0.02-0.4 µg/ml.

### Endotoxin:

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

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**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 rh 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

### Storage:

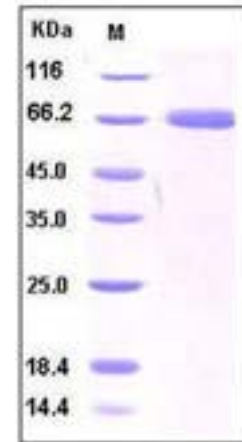
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.

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