# Recombinant Human CD274 Protein, His-tagged

**Cat. No.** CD274-199C **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant Cynomolgus Monkey PD-L1 (CD274) Protein (19-239aa), was expressed in human embryonic kidney cell HEK293 with C-terminal human IgG1 Fc tag (Pro100-Lys330). |
| **Species** | Cynomolgus |
| **Source** | HEK293 |
| **ProteinLength** | 19-239 aa |
| **Description** | B7-H1, also known as PD-L1 and CD274, is an approximately 65 kDa transmembrane glycoprotein in the B7 family of immune regulatory molecules. Mature cynomolgus B7-H1 consists of a 220 amino acid (aa) extracellular domain (ECD) with two immunoglobulin-like domains, a 21 aa transmembrane segment, and a 30 aa cytoplasmic domain. Within the ECD, cynomolgus B7-H1 shares 92%, 72%, and 72% aa sequence identity with human, mouse, and rat B7-H1, respectively. In addition, cynomolgus B7-H1 shares 98%, 94%, 94%, 88%, 78%, 98%, 95%, 94%, and 94% aa sequence identity with rhesus macaque, chimpanzee, sumatran orangutan, white-tufted-ear marmoset, Garnett's greater bushbaby, olive baboon, green monkey, western lowland gorilla, and northern white-cheeked gibbon B7-H1, respectively. B7-H1 is expressed on inflammatory-activated immune cells including macrophages, T cells, and B cells, keratinocytes, endothelial and intestinal epithelial cells, as well as a variety of carcinomas and melanoma. B7-H1 is a B7 ligand and binds to B7-1/CD80 and PD-1 receptors on T cells. It suppresses T cell activation and proliferation and |

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| | induces the apoptosis of activated T cells. It plays a role in the development of immune tolerance by promoting T cell anergy and enhancing regulatory T cell development. B7-H1 favors the development of anti-inflammatory IL-10 and IL-22 producing dendritic cells and inhibits the development of Th17 cells. In cancer, B7-H1 provides resistance to T cell mediated lysis, enhances EMT, and enhances the tumorigenic function of Th22 cells. B7-H1/PD-1 coinhibitory pathway was exploited therapeutically resulting in remarkable outcomes with 20-90% response in various types of cancer. |
| **Form** | Disulfide-linked homodimer |
| **Molecular Mass** | 52 kDa |
| **N-terminal Sequence Analysis** | Phe19 |
| **Endotoxin** | <0.10 EU per 1 μg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Storage** | Avoid repeated freeze-thaw cycles.<br>12 months from date of receipt, -20 to -70 centigrade as supplied.<br>1 month, 2 to 8 centigrade under sterile conditions after reconstitution.<br>3 months, -20 to -70 centigrade under sterile conditions after reconstitution. |
| **Storage Buffer** | Lyophilized from a 0.2 μm filtered solution in PBS. |
| **Reconstitution** | Reconstitute at 200 μg/mL in PBS. |

## GENE INFORMATION

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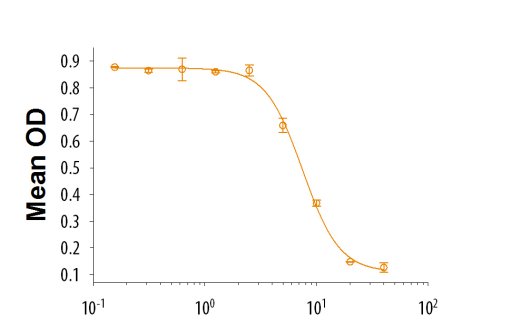
| **Gene Name** | CD274 CD274 molecule [ Macaca fascicularis (crab-eating macaque) ] |
| **Official Symbol** | CD274 |
| **Synonyms** | B7-H; B7H1; B7-H1; B7H1PDCD1L1; CD274 antigenMGC142294; CD274 molecule; CD274; PDCD1L1; PDCD1LG1; PDCD1LG1MGC142296; PDL1; PD-L1; PD-L1B7 homolog 1; PDL1PDCD1 ligand 1; programmed cell death 1 ligand 1; Programmed death ligand 1 |
| **Gene ID** | 102145573 |
| **mRNA Refseq** | XM_005581779 |
| **Protein Refseq** | XP_005581836 |
| **UniProt ID** | G7PSE7 |
| **Bioactivity** |  <br>Recombinant Cynomolgus Monkey PD-L1/B7-H1 Fc Chimera inhibitsanti-CD3 antibody-induced IL-2 secretion in human T lymphocytes. The ED50 for this effect is 2-10 μg/mL. |

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