# Recombinant Cynomolgus Monkey PD-L1/B7-H1 Fc Chimera

Catalog Number: 9326-B7

## DESCRIPTION

**Source**

Human embryonic kidney cell, HEK293-derived

| Cynomolgus Monkey PD-L1 (Phe19-Thr239) Accession # XP_005581836 | IEGRMD | Human $IgG_1$ (Pro100-Lys330) |
|---|---|---|

N-terminus C-terminus

| | |
|---|---|
| **N-terminal Sequence Analysis** | Phe19 |
| **Structure / Form** | Disulfide-linked homodimer |
| **Predicted Molecular Mass** | 52 kDa |

## SPECIFICATIONS

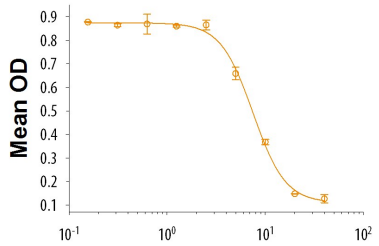
| | |
|---|---|
| **SDS-PAGE** | 58-75 kDa, reducing conditions |
| **Activity** | Measured by its ability to inhibit anti-CD3 antibody induced IL-2 secretion in human T lymphocytes. The $ED_{50}$ for this effect is 2-10 µg/mL. |
| **Endotoxin Level** | <0.10 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 200 µg/mL in PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

## DATA

**Bioactivity**




Recombinant Cynomolgus Monkey PD-L1/B7-H1 Fc Chimera (Catalog # 9326-B7) inhibits anti-CD3 antibody-induced IL-2 secretion in human T lymphocytes. The $ED_{50}$ for this effect is 2-10 µg/mL.



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## BACKGROUND

B7-H1, also known as PD-L1 and CD274, is an approximately 65 kDa transmembrane glycoprotein in the B7 family of immune regulatory molecules (1, 2). 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 (3-6), keratinocytes (7, 8), endothelial and intestinal epithelial cells (8, 10), as well as a variety of carcinomas and melanoma (10, 11). B7-H1 is a B7 ligand and binds to B7-1/CD80 and PD-1 receptors on T cells (6, 7, 11-14). It suppresses T cell activation and proliferation (4, 7, 13, 15) and induces the apoptosis of activated T cells (10). It plays a role in the development of immune tolerance by promoting T cell anergy (6, 13) and enhancing regulatory T cell development (15). B7-H1 favors the development of anti-inflammatory IL-10 and IL-22 producing dendritic cells (4, 9) and inhibits the development of Th17 cells (15). In cancer, B7-H1 provides resistance to T cell mediated lysis, enhances EMT, and enhances the tumorigenic function of Th22 cells (5, 8, 11, 14). B7-H1/PD-1 coinhibitory pathway was exploited therapeutically resulting in remarkable outcomes with 20-90% response in various types of cancer (16).

**References:**

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