Recombinant Human PD-L1/B7-H1 Fc Chimera

Catalog Number: 156-B7

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived

Human PD-L1 (Phe19-Thr239) Accession # Q9NZQ7	DIEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Phe19
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	52 kDa (monomer)

SPECIFICATIONS

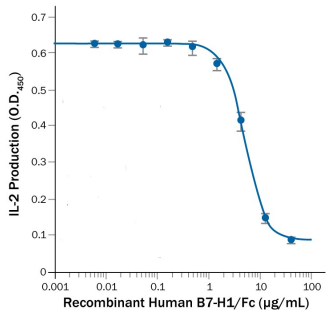
SDS-PAGE	70-75 kDa, reducing conditions
Activity	Measured by its ability to inhibit anti-CD3 antibody induced IL-2 secretion in human T lymphocytes. The ED_{50} for this effect is 2-10 µg/mL.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile 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.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Human PD-L1/B7-H1 Fc Chimera (Catalog # 156-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). Mature human B7-H1 consists of a 220 amino acid (aa) extracellular domain (ECD) with two immunoglobulin-like domains, a 21 aa transmembrane segment, and a 31 aa cytoplasmic domain (2). Within the ECD, human B7-H1 shares 73% and 74% aa sequence identity with mouse and rat B7-H1, respectively. Alternative splicing generates additional isoforms that either lack the first Ig-like domain or are truncated within the second Ig-like domain (3). B7-H1 is expressed on inflammatory-activated immune cells including macrophages, T cells, and B cells (4-7), keratinocytes (8, 9), enothelial and intestinal epithelial cells (8, 10), as well as a variety of carcinomas and melanoma (11, 12). B7-H1 binds to T cell B7-1/CD80 and PD-1 (7, 8, 12-15). It suppresses T cell activation and proliferation (5, 8, 14, 16) and induces the apoptosis of activated T cells (11). It plays a role in the development of immune tolerance by promoting T cell anergy (7, 14) and enhancing regulatory T cell development (16). B7-H1 favors the development of anti-inflammatory IL-10 and IL-22 producing dendritic cells (5, 10) and inhibits the development of Th17 cells (16). In cancer, B7-H1 provides resistance to T cell mediated lysis, enhances EMT, and enhances the tumorigenic function of Th22 cells (6, 9, 12, 15).

References:

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