Recombinant Human PD-L2/B7-DC
Fc Chimera
Catalog Number: 1224-PL

DESCRIPTION

Source: Mouse myeloma cell line, NS0-derived

<table>
<thead>
<tr>
<th>Human PD-L2 (Leu20-Pro219)</th>
<th>IEGRMD</th>
<th>Human IgG1 (Pro100-Lys330)</th>
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</thead>
<tbody>
<tr>
<td>N-terminus</td>
<td>C-terminus</td>
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</table>

N-terminal Sequence Analysis: Leu20

Structure / Form: Disulfide-linked homodimer

Predicted Molecular Mass: 49 kDa (monomer)

SPECIFICATIONS

SDS-PAGE: 70-80 kDa, reducing conditions

Activity: Measured by its binding ability in a functional ELISA. Immobilized recombinant human (rh) PD-L2 at 1 μg/mL (100 µL/well) can bind rhPD-1 with a linear range of 7.5-500 ng/mL.

Endotoxin Level: <1.0 EU per 1 µg of the protein by the LAL method.

Purity: >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation: Lyophilized from a 0.2 µL filtered solution in PBS. 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.

BACKGROUND

Programmed Death Ligand 2 (PD-L2), also known as B7-DC and butyrophilin-like protein, is a member of the B7 family of proteins that provide signals for regulating T-cell activation and tolerance (1). Mature human PD-L2 consists of a 201 amino acid (aa) extracellular domain (ECD) with one V-like and one C-like Ig domain, a 21 aa transmembrane segment, and a 32 aa cytoplasmic domain (2, 3). Within the ECD, mouse and human PD-L2 share 72% aa sequence identity. Alternative splicing generates additional isoforms that lack the second Ig-like domain and may be substituted and truncated following the first Ig-like domain (4). PD-L2 is expressed on dendritic cells, subsets of activated CD4+ and CD8+ T cells, and memory B cells that differentiate into plasma cells (5, 6). At inflammatory sites such as rheumatoid arthritis, allergen exposure, and virus infection, PD-L2 is up-regulated on synovocytes, infiltrating macrophages, dendritic cells, and airway epithelial cells (7-11). PD-L2, along with B7-H1/PD-L1, binds to T cell PD-1 where it promotes IFN-γ production and CD40 Ligand up-regulation while inhibiting IL-4 production (2, 3, 12, 13). In addition, PD-L2 binds to RGM-B on macrophages and alveolar epithelial cells, supporting respiratory immune tolerance (14). In asthma, PD-L2 suppresses IL-5 and IL-13 production, promotes IL-12 production by dendritic cells, and supports allergen-induced airway hyper-responsiveness and mucus production (9, 11).

References: