Recombinant Human PD-L2/B7-D Fc Chimera Alexa Fluor® 488

Catalog Number: AFG1224

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived human PD-L2/B7-DC protein

Human PD-L2 (Leu20-Pro219) Accession # Q9BQ51.2	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis

Leu20

Structure / Form

Disulfide-linked homodimer
Labeled with Alexa Fluor® 488 via amines
Excitation Wavelength: 488 nm
Emission Wavelength: 515-545 nm

Predicted Molecular Mass

49 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	70-80 kDa, under reducing conditions.
Activity	Measured by flow cytometry for its ability to bind anti-human PD-L2/B7-DC Monoclonal Antibody conjugated beads. The concentration of Recombinant Human PD-L2/B7-DC Chimera Alexa Fluor® 488 (Catalog # AFG1224) that produces 50% of the binding response is 60.0-600 ng/mL.
Endotoxin Level	<1.0 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	Supplied as a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Shipping

The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

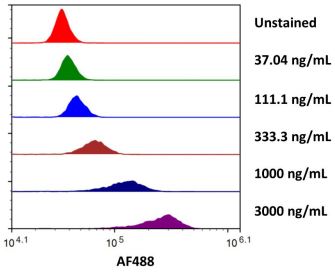
Stability & Storage

Protect from light. Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 6 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after opening.
- 3 months, -20 to -70 °C under sterile conditions after opening.

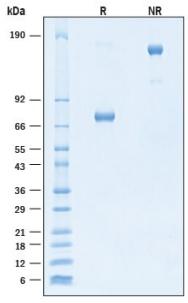
DATA

Flow Cytometry



Flow cytometry analysis for Recombinant Human PD-L2/B7-DC Fc Chimera Alexa Fluor® 488 staining on Anti-Human PD-L2/B7-DC Antibody conjugated beads. Streptavidin coated beads conjugated to biotinylated PD-L2/B7-DC were stained with the indicated concentrations of Recombinant Human PD-L2/B7-DC Fc Chimera Alexa Fluor® 488 (Catalog # AFG1224).

SDS-PAGE



Recombinant Human PD-L2/B7-DC Fc Chimera Alexa Fluor® 488 Protein SDS-PAGE. 2 µg/lane of Recombinant Human PD-L2/B7-DC Fc Chimera Alexa Fluor® 488 Protein (Catalog # AFG1224) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 70-80 kDa and 140-160 kDa, respectively.

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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 (3, 5, 6). At inflammatory sites such as rheumatoid arthritis, allergen exposure, and virus infection, PD-L2 is up-regulated on synoviocytes, 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:

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