

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

Catalog Number: AFG1224

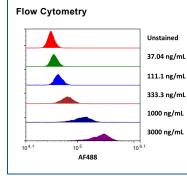
Source	Mouse myeloma cell line, NS0-derived human PD-L2/B7-DC protein			
	Human PD-L2 (Leu20-Pro219) Accession # Q9BQ51.2	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)	
	N-terminus		C-terminus	
N-terminal Sequence Analysis	Leu20			
Structure / Form	Disulfide-linked homodimer Labeled with Alexa Fluor® 488 via amines Excitation Wavelength: 488 nm			
	Emission Wavelength: 515-545 nm			

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. <1.0 EU per 1 µg of the protein by the LAL method.	
Endotoxin Level		
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. ٠ 1 month, 2 to 8 °C under sterile conditions after opening.

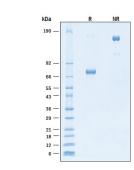
- 3 months, -20 to -70 °C under sterile conditions after opening.

DATA



Flow cytometry 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



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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<sup>+</sup> and CD8<sup>+</sup> 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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