

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Mouse PD-L2 (Leu20-Arg219) Accession # Q9WUL5	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus

N-terminal Sequence Analysis	Leu20
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	49 kDa (monomer)

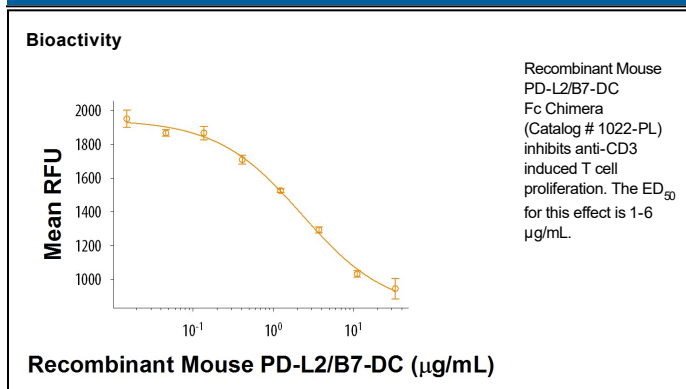
SPECIFICATIONS

SDS-PAGE	76 kDa, reducing conditions
Activity	Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated mouse T cells. The ED ₅₀ for this effect is 1-6 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 400 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. <ul style="list-style-type: none"> ● 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



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 mouse PD-L2 consists of a 199 amino acid (aa) extracellular domain (ECD) with one V-like and one C-like Ig domain, a 23 aa transmembrane segment, and a 5 aa cytoplasmic domain (2, 3). Within the ECD, mouse and human PD-L2 share 72% aa sequence identity. 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). 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 (6-10). 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, 11, 12). In addition, PD-L2 binds to RGM-B on macrophages and alveolar epithelial cells, supporting respiratory immune tolerance (13). 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 (8, 10).

References:

1. Ceeraz, S. *et al.* (2013) *Trends Immunol.* **34**:556.
2. Latchman, Y. *et al.* (2001) *Nat. Immunol.* **2**:261.
3. Tseng, S.-Y. *et al.* (2001) *J. Exp. Med.* **193**:839.
4. Messal, N. *et al.* (2011) *Mol. Immunol.* **48**:2214.
5. Zuccarino-Catania, G.V. *et al.* (2014) *Nat. Immunol.* **15**:631.
6. Guo, G. *et al.* (2012) *Clin. Rheumatol.* **31**:271.
7. Loke, P. and J.P. Allison (2003) *Proc. Natl. Acad. Sci. USA* **100**:5336.
8. Matsumoto, K. *et al.* (2004) *J. Immunol.* **172**:2530.
9. Stanciu, L.A. *et al.* (2006) *J. Infec. Dis.* **193**:404.
10. Lewkowich, I.P. *et al.* (2013) *Mucosal Immun.* **6**:728.
11. Ghiotto, M. *et al.* (2010) *Int. Immunol.* **22**:651.
12. Shin, T. *et al.* (2003) *J. Exp. Med.* **198**:31.
13. Xiao, Y. *et al.* (2014) *J. Exp. Med.* **211**:943.