

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived porcine PD-L1/B7-H1 protein		
	Porcine PD-L1/B7-H1 (Phe19-Thr237) Accession # NP_001020392.1	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence	Phe19		
Analysis			
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	52 kDa		

SPECIFICATIONS

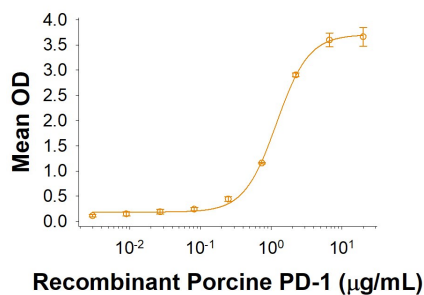
SDS-PAGE	65-85 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Porcine PD-L1/B7-H1 Fc Chimera (Catalog # 10397-B7) is immobilized at 2 µg/mL (100 µL/well), the concentration of Recombinant Porcine PD-1 His-tag that produces 50% of the optimal binding response is found to be approximately 0.8-6 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, 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 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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.

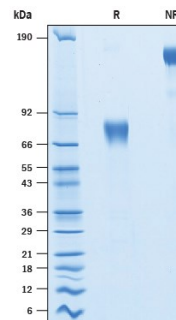
DATA

Binding Activity



When Recombinant PD-L1/B7-H1 Fc Chimera (Catalog # 10397-B7) is immobilized at 2 µg/mL (100 µL/well), the concentration of Recombinant Porcine PD-1 His-tag that produces 50% of the optimal binding response is found to be approximately 0.8-6 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Porcine PD-L1/B7-H1 Fc Chimera (Catalog # 10397-B7) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 65-85 kDa and 130-170 kDa, respectively.

BACKGROUND

Programmed cell death 1 ligand 1 (PD-L1), also known as B7-H1 and CD274, is a transmembrane glycoprotein and a member of the B7 family of immune regulatory molecules within the immunoglobulin (Ig) superfamily (1). Mature porcine PD-L1 consists of an extracellular domain (ECD) with both an Ig-V and Ig-C-like motif, a single transmembrane domain, and a short cytoplasmic tail lacking a canonical signaling motif (1). The mature ECD of porcine PD-L1 shares 74% and 67% amino acid sequence identity with human and mouse B7-H1, respectively. Alternative splicing of PD-L1 generates additional isoforms that either lack the first Ig-like domain or are truncated within the second Ig-like domain (2). B7-H1 is expressed on inflammatory-activated immune cells including macrophages, T cells, and B cells, keratinocytes, endothelial and intestinal epithelial cells, as well as a variety of carcinomas and melanoma (3-9). B7-H1 binds to T cell B7-1/CD80 and PD-1 (7-9). It suppresses T cell activation and proliferation and induces the apoptosis of activated T cells (6, 10). It plays a role in the development of immune tolerance by promoting T cell anergy and enhancing regulatory T cell development (9). B7-H1 favors the development of anti-inflammatory IL-10 and IL-22 producing dendritic cells and inhibits the development of Th17 cells (5, 10). In cancer, B7-H1 provides resistance to T cell mediated lysis, enhances EMT, and enhances the tumorigenic function of Th22 cells (3-4, 7, 9).

References:

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