Biotinylated Recombinant Mouse PD-L1/B7-H1 Fc Chimera Avi-tag

Catalog Number: AVI1019

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived mouse PD-L1/B7-H1 protein

Mouse B7-H1 (Phe19-Thr238) Accession # Q9EP73.1	IEGRMD	Human IgG_1 (Pro100-Lys330)	Avi-tag

N-terminus C-terminus

N-terminal Sequence Analysis	Phe19
Structure / Form	Biotinylated via Avi-tag
Predicted Molecular Mass	53 kDa

SPECIFICATIONS

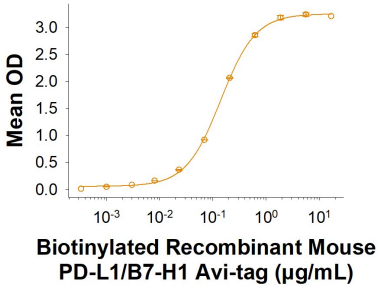
SDS-PAGE	67-85 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse PD-1 Fc Chimera Protein (Catalog # 1021-PD) is immobilized at 2.50 µg/mL (100 µL/well), Biotinylated Recombinant Mouse PD-L1/B7-H1 Fc Chimera Avi-tag (Catalog # AVI1019) binds with an ED_{50} of 0.0600-0.600 µg/mL.
Endotoxin Level	<0.10 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 with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in 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.

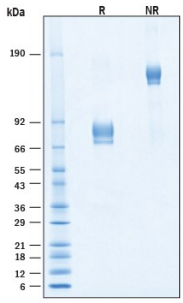
DATA

Binding Activity



Biotinylated Recombinant Mouse PD-L1/B7-H1 Fc Chimera Avi-tag Protein Binding Activity. Measured by its binding ability in a functional ELISA. When Recombinant Mouse PD-1 Fc Chimera Protein (Catalog # 1021-PD) is immobilized at 2.5 µg/mL (100 µL/well), Biotinylated Recombinant Mouse PD-L1/B7-H1 Fc Chimera Avi-tag Protein (Catalog # AVI1019) binds with an ED_{50} of 0.0600-0.600 µg/mL.

SDS-PAGE



Biotinylated Recombinant Mouse PD-L1/B7-H1 Fc Chimera Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Mouse PD-L1/B7-H1 Fc Chimera Avi-tag Protein (Catalog # AVI1019) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 67-85 kDa and 130-170 kDa, respectively.

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BACKGROUND

B7-H1, also known as PD-L1 and CD274, is an approximately 65 kDa transmembrane glycoprotein in the B7 family of immune regulatory molecules (1). Mature mouse B7-H1 consists of a 221 amino acid (aa) extracellular domain (ECD) with two immunoglobulin-like domains, a 21 aa transmembrane segment, and a 30 aa cytoplasmic domain (2). Within the ECD, mouse B7-H1 shares 73% and 86% aa sequence identity with human and rat B7-H1, respectively. B7-H1 is expressed on inflammatory-activated immune cells including macrophages, T cells, and B cells (2-5), keratinocytes (6, 7), enothelial and intestinal epithelial cells (6, 8), as well as a variety of carcinomas and melanoma (9, 10). B7-H1 binds to T cell B7-1/CD80 and PD-1 (5, 6, 10-13). It suppresses T cell activation and proliferation (3, 6, 12, 14) and induces the apoptosis of activated T cells (9). It plays a role in the development of immune tolerance by promoting T cell anergy (5, 12) and enhancing regulatory T cell development (14). B7-H1 favors the development of anti-inflammatory IL-10 and IL-22 producing dendritic cells (3, 8) and inhibits the development of Th17 cells (14). In cancer, B7-H1 provides resistance to T cell mediated lysis, enhances EMT, and enhances the tumorigenic function of Th22 cells (4, 7,10,13). Our Avi-tag Biotinylated mouse B7-H1 Fc Chimeria features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

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