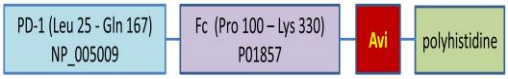
Datasheet

Biotinylated Human PD-1 / PDCD1, His Tag & Fc Tag, Avi Tag (Avitag™)

Catalog # AMS.PD1-H82F2

For Research Use Only

Description

Source	MABSol® Biotinylated Human PD-1 / PDCD1, His Tag & Fc Tag (PD1-H82F2) is expressed from human HEK293 cells. It contains AA Leu 25 - Gln 167 (Accession # NP_005009).
Predicted N-terminus	Leu 25
Protein Structure	
Molecular Characterization	This protein carries a human IgG1 Fc fragment at the C-terminus, followed by a polyhistidine tag. The Avi tag (Avitag™) is inserted in-between the Fc and his tags. The protein has a calculated MW of 44.4 kDa. The protein migrates as 50-66 kDa on a SDS-PAGE gel under reducing (R) condition due to glycosylation and 100-130 kDa under non-reducing (NR) condition.

Application

Biotinylation	Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.
Biotin:Protein Ratio	The biotin to protein ratio is 0.5-1 as determined by the HABA assay.
Endotoxin	Less than 1.0 EU per μg by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Bioactivity	Measured by its binding ability in a functional ELISA against immobilized Human PD-L1, Fc Tag (Cat# PD1-H5258, 0.5μg/well). The linear range is 0.01-0.1 μg/mL.

Formulation and Storage

Formulation	Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally Trehalose is added as protectant before lyophilization. Contact us for customized product form or formulation.
Reconstitution	Reconstitute at 200 μg/mL in sterile deionized water. For best performance, we strongly recommend you to follow the reconstitution protocol provided in the COA.
Storage	For long term storage, the product should be stored at lyophilized state at -20°C or lower. Please avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: • 4-8℃ for 12 months in lyophilized state; • -70℃ for 3 months under sterile conditions after reconstitution.

Background

Background	Programmed cell death protein 1 (PD-1) is also known as CD279 and PDCD1, is a type I membrane protein and is a member of the extended CD28/CTLA-4 family of T cell regulators. PDCD1 is expressed on the surface of activated T cells, B cells, macrophages, myeloid cells and a subset of thymocytes. PD-1 has two ligands, PD-L1 and PD-L2, which are members of the B7 family. PD-L1 is expressed on almost all murine tumor cell lines, including PA1 myeloma, P815 mastocytoma, and B16 melanoma upon treatment with IFN-γ. PD-L2 expression is more restricted and is expressed mainly by DCs and a few tumor lines. PD1 inhibits the T-cell proliferation and production of related cytokines including IL-1, IL-4, IL-10 and IFN-γ by suppressing the activation and transduction of PI3K/AKT pathway.
References	(1) Ishida Y., et al., 1992, EMBO J. 11 (11): 3887–95. (2) Blank C., et al., 2007, Cancer Immunol. Immunother. 56 (5): 739–45. (3) Agata Y., et al., 1996, Int. Immunol. 8 (5): 765–72.

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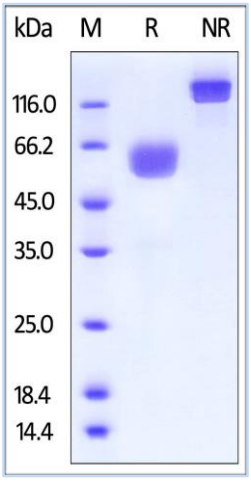
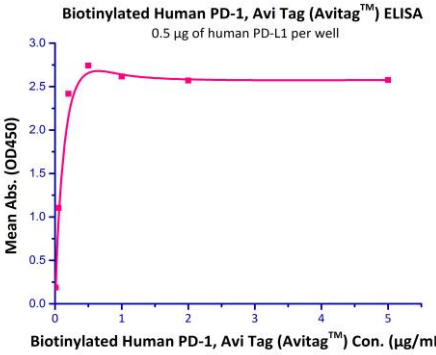
Assay Data

SDS-PAGE Data



Biotinylated Human PD-1, His Tag & Fc tag on SDS-PAGE under reducing (R) and no-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity Data



Immobilized Human PD-L1, Fc Tag (Cat# AMS.PD1-H5258) at 5μg/mL (100 μl/well),can bind Biotinylated Human PD-1, His Tag & Fc Tag (Cat# AMS.PD1-H82F2) with a linear range of 0.01-0.1 μg/mL.

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