

Datasheet

Biotinylated Mouse PD-1 / PDCD1, Fc Tag, Avi Tag (Avitag™)

Catalog # AMS.PD1-M82F4

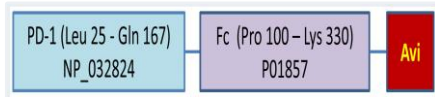
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Description

Source MABSol® Biotinylated Mouse PD-1 / PDCD1, Fc Tag (AMS.PD1-M82F4) is expressed from human HEK293 cells. It contains AA Leu 25 - Gln 167 (Accession # NP_032824).

Predicted N-terminus Leu 25

Protein Structure



Molecular Characterization

This protein carries a human IgG1 Fc fragment at the C-terminus, followed by an Avi tag (Avitag™). The protein has a calculated MW of 44.6 kDa. The protein migrates as 55-66 kDa on a SDS-PAGE gel under reducing (R) condition due to glycosylation.

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

>92% as determined by reduced SDS-PAGE.

Bioactivity

Measured by its binding ability in a functional ELISA against immobilized Mouse PD-L1 / B7-H1 Protein, Fc Tag (Cat# PD1-M5251, 1µg/well). The linear range is 0.15-2.5 µg/mL.

Formulation and Storage

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM tris, 100 mM glycine, pH7.5. Normally Trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Reconstitute at 100 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°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

Background

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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. In addition, coligation of PD1 inhibits BCR-mediated signal by dephosphorylating key signal transducer. In vitro, treatment of anti-CD3 stimulated T cells with PD-L1-Ig results in reduced T cell proliferation and IFN-γ secretion. Monoclonal antibodies targeting PD-1 that boost the immune system are being developed for the treatment of cancer.

References

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- (3) Agata Y., et al., 1996, Int. Immunol. 8 (5): 765-72.
- (4) Freeman GJ., et al., 2000, J. Exp. Med. 192 (7): 1027-34.
- (5) Latchman Y., et al., 2001, Nat. Immunol. 2 (3): 261-8.
- (6) Yamazaki T., et al., 2002, J. Immunol. 169 (10): 5538-45.

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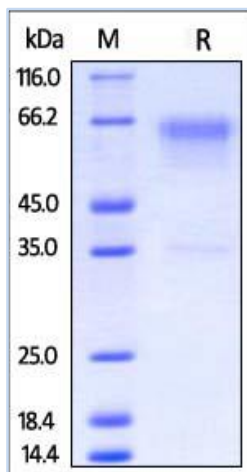
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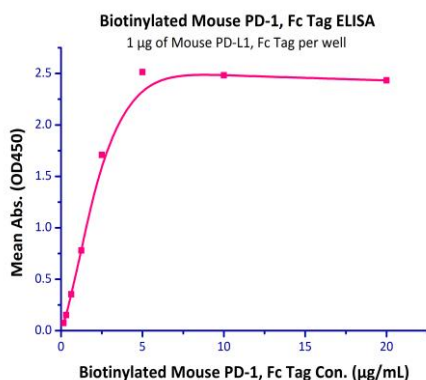
Assay Data

SDS-PAGE Data



Biotinylated Mouse PD-1, Fc tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 92%.

Bioactivity Data



Immobilized Mouse PD-L1 / B7-H1 Protein, Fc Tag (Cat# AMS.PD1-M5251) at 10 µg/mL (100 µl/well) can bind Biotinylated Mouse PD-1, Fc tag (Cat# AMS.PD1-M82F4) with a linear range of 0.15-2.5 µg/mL.

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Limited Use License

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