

Biotinylated PD-1/PDCD1, Human Recombinant

CATALOG NO:	P1038-10	10 µg
	P1038-50	50 µg
ALTERNATIVE NAMES:	PDCD1, PD1, CD279, SLEB2, hPD-1, hPD-1	
SOURCE:	<i>E. coli</i>	
FORM:	Liquid	
FORMULATION:	Liquid in PBS containing 20% glycerol	
PURITY:	≥ 90% by SDS-PAGE and SEC analyses	
MOL. WT.:	19.7 kDa (25-167 aa + N-terminal Poly-his tag)	

STORAGE CONDITIONS: Store at -20 °C. Stable for at least 6 months as supplied. Avoid repeated freeze-thaw cycles.

BACKGROUND: Programmed 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. This protein is suitable for use in protein studies such as protein structure analysis and protein-protein interactions. It can also be used as an immunogen, as a protein standard, or in cell biology research applications.

APPLICATIONS: Biotinylated Human Recombinant PD-1 can be used in the activity or inhibitor screening, substrate profiling, western blotting, ELISA, and other functional assays.

SPECIFIC ACTIVITY: BioVision's Biotinylated Human Recombinant PD-1 has been tested for its biotin content (1 biotin per PD-1 as determined by K811-100) and ability to bind Human PD-L1 in a functional ELISA with a linear range of 0.125-1 µg/ml.

For Research Use Only! Not to be used in humans.

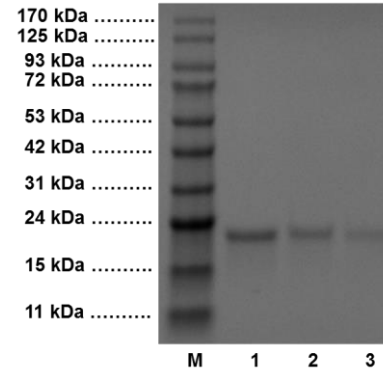
A

Fig. 1A: SDS-PAGE (4-20%) of Biotinylated Human Recombinant PD-1:
M: Protein Marker
1: Biotinylated Human PD-1 (10 µg)
2: Biotinylated Human PD-1 (5 µg)
3: Biotinylated Human PD-1 (2 µg)

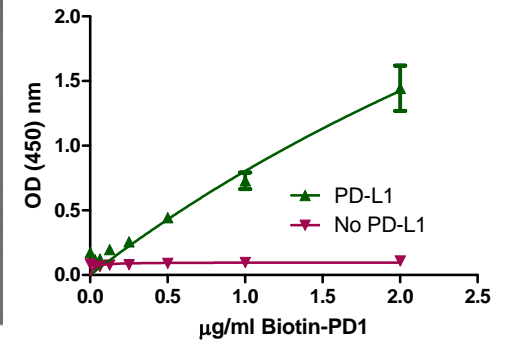
B

Fig. 1B: Biotinylated Human Recombinant PD-1 is able to bind Human PD-L1 immobilized at 2 µg/ml in a functional ELISA (n = 3)

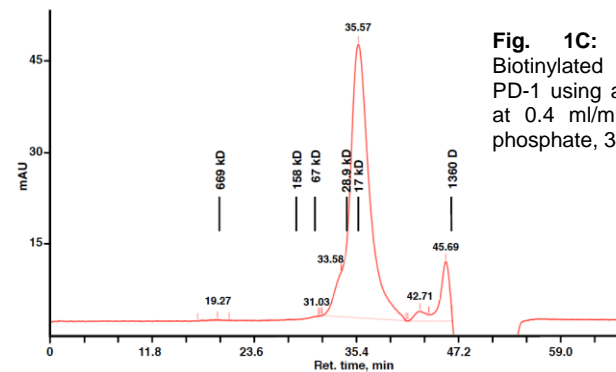
C

Fig. 1C: SEC analysis of Biotinylated Human Recombinant PD-1 using a Superose 12 column at 0.4 ml/min in 50 mM sodium phosphate, 300 mM NaCl, pH 7.5

RELATED PRODUCTS:

- PD-1/PDCD1, Human Recombinant (**Cat. No. P1024-10,-50**)
- PD-L1 /CD274, Human Recombinant (**Cat. No. P1023-10,-50**)
- PD-1 (human) ELISA Kit (**Cat. No. K4153-100**)
- PD-1/PD-L1 Inhibitor 2 (**Cat. No. B1050-5,-25**)
- Human CellExp™ Biotinylated PD-1 / PDCD1, His Tag & Fc Tag, human recombinant (**Cat. No. 7877-5**)
- Human CellExp™ PD-1 /PDCD1, C-Fc Tag, human recombinant (**Cat. No. 7500-5,-25**)
- Human CellExp™ PD-1 /PDCD1, human recombinant (**Cat. No. 7498-10,-50**)