

## Active Recombinant Human PDCD1 Protein, His&Avi tagged

Cat. No. PDCD1-76H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	PD-1 dimer protein contains a PD-1 extracellular domain (UniProt# Q15116) fused with a proprietary dimer motif followed by a tandem His-Avi tag at the C-terminus.
<b>Species</b>	Human
<b>Source</b>	HEK293T
<b>ProteinLength</b>	25-170 aa
<b>Description</b>	<p>Human programmed cell death protein 1 (PD-1), is a Type I membrane protein and cell surface receptor on T cells and B cells and belongs to the immunoglobulin superfamily. PD-1 is also known as PDCD1, cluster of differentiation 279 (CD279), systemic lupus erythematosus susceptibility 2 (SLEB2), and systemic lupus erythematosus susceptibility (hSLE1). PD-1 contains an extracellular immunoglobulin-V-like (Ig-V-like) domain followed by a transmembrane region, and an intracellular tail. PD-1 is an immune checkpoint that binds two ligands, PD-L1 and PD-L2, which are members of the B7 family. PD-L1 serves as an immunosuppressive ligand for PD-1 and the overexpression of PD-L1 on many tumor cells can prevent the immune system from attacking tumors. Inhibition of the interaction between PD-1 and PD-L1 can enhance antitumor activity, which has led to a new class of drugs called PD-1 inhibitors to activate the immune system and treat certain types of cancer. Although previously considered monomeric, PD-1 has been shown to have a propensity for forming homodimers and this homodimerization increases the potency of its activity.</p>

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

	Therefore, a recombinant protein mimicking the PD-1 dimer conformation can be crucial for cancer therapeutic discovery.
<b>Molecular Mass</b>	52 kDa
<b>Homodimer/Heterodimer</b>	Homodimer
<b>Purity</b>	Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition
<b>Application</b>	Verified Applications: ELISA for PD-1-specific antibody and PD-L1 ligand protein binding assays. Suggested Applications: ELISA for PD-1-specific antibody and PD-L1 ligand protein binding assays. SPR & BLI for PD-1-specific antibody and PD-L1 protein binding assays. Animal immunization, RUO.
<b>Storage</b>	At -80 centigrade
<b>Storage Buffer</b>	0.2µm filtered PBS, pH 7.4, no preservatives
<b>Shipping</b>	Frozen Dry Ice

## GENE INFORMATION

<b>Gene ID</b>	5133
<b>Gene Name</b>	PDCD1 programmed cell death 1 [Homo sapiens (human)]
<b>Official Symbol</b>	5133
<b>Synonyms</b>	PDCD1; programmed cell death 1; programmed cell death protein 1; CD279; PD1; protein PD-1; PD-1; SLEB2; hPD-1; hPD-I;

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<b>mRNA Refseq</b>	NM_005018
<b>Official Symbol 2</b>	PDCD1
<b>Gene ID 2</b>	5133
<b>Gene Name 2</b>	PDCD1 programmed cell death 1 [Homo sapiens (human)]
<b>mRNA Refseq 2</b>	NM_005018
<b>Protein Refseq 2</b>	NP_005009
<b>MIM 2</b>	600244
<b>UniProt ID 2</b>	Q15116
<b>Bioactivity-Antibody Binding</b>	Immobilized human PD-1-His-Avi dimer protein at 2 µg/mL (100 µL/well) can bind anti-human PD-1 monoclonal antibody with half maximal effective concentration (EC50) range of 5-20 ng/mL (QC tested).
<b>Bioactivity-Ligand Binding</b>	Immobilized human PD-1-His-Avi dimer protein at 2 µg/mL (100 µL/well) can bind human PD-L1 with half maximal effective concentration (EC50) range of 16.8-67.1 ng/mL (QC tested).
<b>SDS-PAGE</b>	MW: Molecular Weight marker reduced condition NR: PD-1 dimer under non-reducing condition

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