

## Product Data Sheet

## PD-1 Protein, Cynomolgus (Biotinylated, 143a.a, HEK293, Fc-Avi)

Cat. No.:	HY-P73725
Synonyms:	CD279; hPD-1; PDCD1; Programmed cell death 1; SLEB2
Species:	Cynomolgus
Source:	HEK293
Accession:	B0LAJ3 (L25-Q167)
Gene ID:	102123659
Molecular Weight:	Approximately 44.5 kDa

PROPERTIES	
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu g/mL$ in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION	
Background	PD-1 is a protein encoded by the PDCD1 gene in the human body. PD-1 is a cell surface receptor on T cells and B cells, which regulates the immune system's response to human cells by inhibiting the inflammatory activity of T cells, downregulating the immune system and promoting self-tolerance. PD-1 is an immune checkpoint that protects autoimmunity by promoting apoptosis of antigen-specific T cells in lymph nodes (programmed cell death) and reducing apoptosis of regulatory T cells (anti-inflammatory, inhibitory T cells). PD-1 can bind to two ligands, PD-L1 and PD-L2. The expression of PD-L1 on tumor cells inhibits anti-tumor activity through the binding of PD-1 to effector T cells. PD-1 knockout mice showed lupus-like glomerulonephritis and dilated cardiomyopathy in the C57BL/6 and BALB/c gene backgrounds, respectively. In the mouse thymus, the gene was induced to express in the thymus when anti-CD3 antibodies were injected and a large number of thymocytes underwent apoptosis. Mice bred in the BALB/c context lacking the gene developed dilated cardiomyopathy and died of congestive heart failure <sup>[1][2][3][4][5]</sup> .

## Caution: Product has not been fully validated for medical applications. For research use only.

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