

Active Recombinant Human PDCD1, no tag

Cat. No. PDCD1-172H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human PDCD1(Leu 25 - Leu 288), fused with no tag, was expressed in HEK293.
Species	Human
Source	HEK293
ProteinLength	Leu 25 - Leu 288

Description

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.

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Predicted N Terminal	Leu 25
Form	Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM glycine, pH7.5. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Bio-activity	Immobilized rh full length PDCD1 /PD1 at 2 µg/ml (100 µl/well) can bind Human PD-L1 /B7-H1 Fc Chimera with a linear range of 20 - 200 ng/ml.
Molecular Mass	DTT-reduced Protein migrates as 29-70 kDa in SDS-PAGE due to glycosylation.
Endotoxin	Less than 1.0 EU per µg of the rh PDCD1 /PD1 (full length) by the LAL method.
Purity	>92% as determined by SDS-PAGE.
Storage	No activity loss was observed after storage at: In lyophilized state for 1 year (4 centigrade); After reconstitution under sterile conditions for 3 months (-70 centigrade).
Warning	Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	PDCD1 programmed cell death 1 [Homo sapiens]
Official Symbol	PDCD1
Synonyms	PD1; PD-1; CD279; SLEB2; hPD-1; hPD-I; hSLE1; programmed cell death protein 1; protein PD-1; systemic lupus erythematosus susceptibility 2
Gene ID	5133
mRNA Refseq	NM_005018

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Protein Refseq	NP_005009
MIM	600244
UniProt ID	Q15116
Chromosome Location	2q37.3
Pathway	Adaptive Immune System, organism-specific biosystem; Cell adhesion molecules (CAMs), organism-specific biosystem; Cell adhesion molecules (CAMs), conserved biosystem
Function	protein binding; signal transducer activity

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