

Recombinant human PD-1 protein

Catalog Number: ATGP4027

PRODUCT INFORMATION

Expression system

HEK293

Domain

21-170aa

UniProt No.

Q15116

NCBI Accession No.

NP_005009.2

Alternative Names

Programmed cell death protein 1, PDCD1, CD279, hPD-1, hPD-I, hSLE1, PD-1, PD1, SLEB2

PRODUCT SPECIFICATION

Molecular Weight

42.9 kDa (383aa)

Concentration

0.5mg/ml (determined by absorbance at 280nm)

Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity

> 95% by SDS-PAGE

Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity

Measured by its binding ability in a functional ELISA with Human PD-L1/B7-H1 (CAT# ATGP3631).

Tag

hIgG-Tag

Application

SDS-PAGE, Bioactivity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

PD-1, also known as programmed cell death protein 1, is a type 1 transmembrane glycoprotein, and is an

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immune-receptor belonging to the CD28/CTLA4 family. This protein is expressed on the surface of activated T-cell, B-cell, macrophages, myeloid cells and subset of thymocytes. It has a role in regulating the immune system's response to the cells of the human body by down-regulating the immune system and promoting self-tolerance by suppressing T cell inflammatory activity. This prevents autoimmune diseases, but it can also prevent the immune system from killing cancer cells. This protein is an immune checkpoint and guards against autoimmunity through two mechanisms. It promotes apoptosis of antigen-specific T-cells in lymph nodes, And reduces apoptosis in regulatory T cells. PD-1 inhibitors, a new class of drugs that block PD-1, activate the immune system to attack tumors and are used to treat certain types of cancer. Blocking the PD-1 and PD-L1 interaction has proven successful in treating many different cancer type. Recombinant human PD-1, fused to hlgG-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

Amino acid Sequence

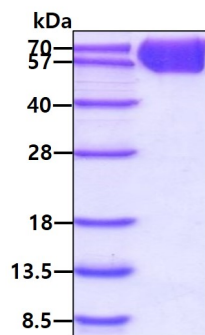
PGWFLDSPDR PWNPTTFSPA LLVTEGDNA TFTCSFSNTS ESFVLNWYRM SPSNQTDKLA AFPEDRSQPG QDCRFRTQL PNGRDFHMSV VRARRNDSGT YLCGAISLAP KAIKESLRA ELRVTERRAE VPTAHPSPSP RPAGQFQTLV <LEPKSCDKTH TCPPCPAPEL LGGPSVFLFP PKPKDTLMIS RTPEVTCVVV DVSHEDPEVK FNWYVDGVEV HNAKTKPREE QYNSTYRVVS VLTVLHQDWL NGKEYKCKVS NKALPAPIEK TISKAKGQPR EPQVYTLPPS RDELTKNQVS LTCLVKGFYP SDIAVEWESN GQPENNYKTT PPVLDSDGSF FLYSKLTVDK SRWQQGNVFS CSVMHEALHN HYTKSLSLS PGK>

General References

Ishida Y., et al, (1992) EMBO J. 11:3887-3895.
Lastwika KJ., et al, (2016) Cancer Res. 76:227-238.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

Biological Activity

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Human PDCD1 is coated at 5 ug/ml (100 ul/well) can bind Human PD-L1/B7-H1 (CAT# ATGP3631) in a Functional ELISA assay.

