

Product datasheet for **RC210364**

PD1 (PDCD1) (NM_005018) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | PD1 (PDCD1) (NM_005018) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | PD1 |
| Synonyms: | CD279; hPD-1; hPD-I; hSLE1; PD-1; PD1; SLEB2 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC210364 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCAGATCCCACAGGCGCCCTGGCCAGTCGTCTGGGCGGTGCTACAACCTGGGCTGGCGGCCAGGATGGT
TCTTAGACTCCCCAGACAGGCCCTGGAACCCCCACCTTCTCCCAGCCCTGCTCGTGGTGACCGAAGG
GGACAACGCCACCTTCACCTGCAGCTTCTCCAACACATCGGAGAGCTTCGTGCTAACTGGTACCGCATG
AGCCCCAGCAACCAGACGACAAGCTGGCCGCTTCCCCGAGGACCGCAGCCAGCCCGGCCAGGACTGCC
GCTTCCGTGTACACAACCTGCCAACGGGCGTGACTTCCACATGAGCGTGGTCAGGGCCCGCGCAATGA
CAGCGGCACCTACCTCTGTGGGGCCATCTCCCTGGCCCCAAGGCGCAGATCAAAGAGAGCTGCGGGCA
GAGCTCAGGGTGACAGAGAGAAGGGCAGAAGTGCCACAGCCACCCAGCCCTCACCCAGGCCAGCCG
GCCAGTTCCAAACCTGGTGGTTGGTGTCTGTGGGCGCCCTGCTGGGCAGCCTGGTGTGCTAGTCTGGGT
CCTGGCCGTCTCTGCTCCCGGGCCGCACGAGGGACAATAGGAGCCAGGCGCACCCGGCCAGCCCTGAAG
GAGGACCCCTCAGCCGTGCCTGTGTTCTCTGTGGACTATGGGGAGCTGGATTTCCAGTGGCGAGAGAAGA
CCCCGGAGCCCCCGTGCCTGTGTCCCTGAGCAGACGGAGTATGCCACCATTGTCTTCTAGCGGAAT
GGGCACCTCATCCCCGCCCCGAGGGGCTCAGCCGACGGCCCTCGGAGTGCCAGCCACTGAGGCCTGAG
GATGGACTGCTCTTGGCCCCCTC

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC210364 protein sequence
 Red=Cloning site Green=Tags(s)

MQIPQAPWPVVWAVLQLGWRPGWFLDSPDRPWNPTTFSPALLVVTEGDNATFTCSFSNTSESVLNNWYRM
 SPSNQTDKLAAPFEDRSQPGQDCRFVTVLQPNRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRA
 ELRVTERRAEVPTAHPSPSPRPAGQFQTLVVGVVGGLLGSLVLLVWVLAIVCSRAARGTIGARRTGQPLK
 EDPSAVPVFVSDYGELEDFQWREKTPPEPPVPCVPEQTEYATIVFSPGMGTSSPARRGSADGPRSAQPLRPE
 DGHCSWPL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6192_b02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005018

ORF Size: 864 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_005018.3](#)

RefSeq Size: 2115 bp

RefSeq ORF: 867 bp

Locus ID: 5133

UniProt ID: [Q15116](#)

Cytogenetics: 2q37.3

Domains: ig, IGv, IG

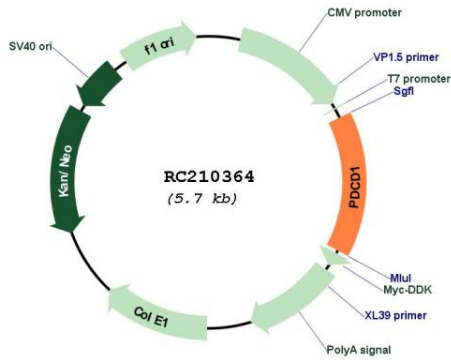
Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Cell adhesion molecules (CAMs), T cell receptor signaling pathway

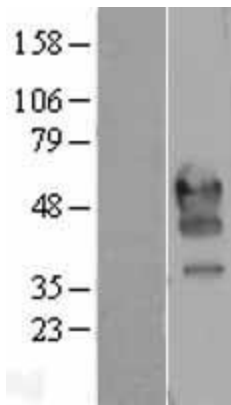
MW: 31.6 kDa

Gene Summary: Programmed cell death protein 1 (PDCD1) is an immune-inhibitory receptor expressed in activated T cells; it is involved in the regulation of T-cell functions, including those of effector CD8+ T cells. In addition, this protein can also promote the differentiation of CD4+ T cells into T regulatory cells. PDCD1 is expressed in many types of tumors including melanomas, and has demonstrated to play a role in anti-tumor immunity. Moreover, this protein has been shown to be involved in safeguarding against autoimmunity, however, it can also contribute to the inhibition of effective anti-tumor and anti-microbial immunity. [provided by RefSeq, Aug 2020]

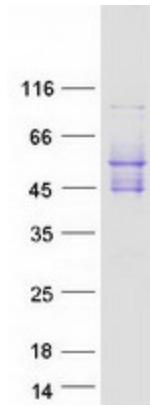
Product images:



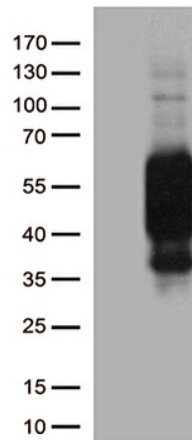
Circular map for RC210364



Western blot validation of overexpression lysate (Cat# [LY401555]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210364 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PDCD1 protein (Cat# [TP310364]). The protein was produced from HEK293T cells transfected with PDCD1 cDNA clone (Cat# RC210364) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PDCD1 (Cat# RC210364, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PDCD1 antibody (Cat# [UM800091])(1:2000).