

Product datasheet for **RC203575**

PPP1A (PPP1CA) (NM_002708) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PPP1A (PPP1CA) (NM_002708) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PPP1A
Synonyms:	PP-1A; PP1A; PP1alpha; PPP1A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203575 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCGACAGCGAGAAGCTCAACCTGGACTCGATCATCGGGCGCCTGCTGGAAGTGCAGGGCTCGCGGC
CTGGCAAGAATGTACAGCTGACAGAGAACGAGATCCGCGGTCTGTGCCTGAAATCCCGGGAGATTTTCT
GAGCCAGCCATTCTTCTGGAGCTGGAGGCACCCCTCAAGATCTGCGGTGACATACCGCCAGTACTAC
GACCTTCTGCGACTATTTGAGTATGGCGGTTTCCCTCCCGAGAGCAACTACCTCTTCTGGGGACTATG
TGGACAGGGGCAAGCAGTCCTTGGAGACCATCTGCCTGCTGCTGGCCTATAAGATCAAGTACCCCGAGAA
CTTCTTCTGCTCCGTGGGAACCACGAGTGTGCCAGCATCAACCGCATCTATGGTTTCTACGATGAGTGC
AAGAGACGCTACAACATCAAACCTGTGAAAACCTTCACTGACTGTTCAACTGCCTGCCATCGCGGCCA
TAGTGGACGAAAAGATCTTCTGCTGCCACGGAGGCCTGTCCCGGACCTGCAGTCTATGGAGCAGATTTCG
GCGGATCATGCGGCCACAGATGTGCCTGACCAGGGCCTGCTGTGTGACCTGCTGTGGTCTGACCCTGAC
AAGGACGTGCAGGGCTGGGGCGAGAACGACCGTGGCGTCTTTTTACCTTTGGAGCCGAGGTGGTGGCCA
AGTTCTCCACAAGCAGCACTTGGACCTCATCTGCCGAGCACACCAGGTGGTAGAAGACGGCTACGAGTT
CTTTGCCAAGCGGCAGCTGGTGACACTTTTCTCAGCTCCCACTACTGTGGCGAGTTTGACAATGCTGGC
GCCATGATGAGTGTGGACGAGACCCTCATGTGCTTTTCCAGATCCTCAAGCCCGCCGACAAGAACAAGG
GGAAGTACGGGCAGTTTCACTGGCCTGAACCTGGAGGCCGACCCATCACCCACCCCGCAATTCCGCCAA
AGCCAAGAAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC203575 protein sequence
Red=Cloning site Green=Tags(s)

MSDSEKLNLD SIIGRLLEVQGSRP GKNVQLTENEIRGLCLKSREIFLSQPILLELEAPLKICGDIHGQYY
 DLLRLFEYGGFPPE SNYLF LGDYVDRGKQSL ETICLLLAYKIKYPENFFLLRGNHECASINRIYGFYDEC
 KRRYNIKLWKTFTDCFNCLPIAAIVDEKIFCCHGGLSPDLQSMEQIRIRMRPTDVPDQGLLCDLLWSDPD
 KD VQGWGENDRGVSFTFGAEVVAKFLHKHDLDLICRAHQVVEDGYEFFAKRQLVTLFSAPNYCGEFDNAG
 AMMSVDETLMCSFQILKPADKKNKGKYGFSGLNPGRPIITPPRNSAKAKK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6078_g06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_002708

ORF Size: 990 bp

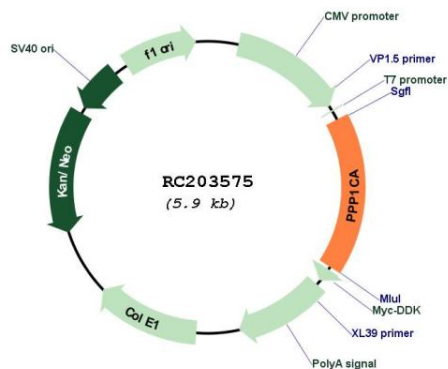
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

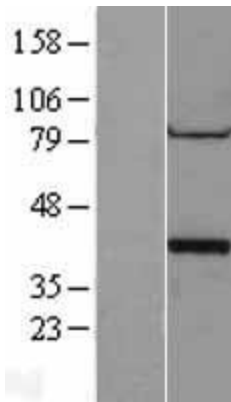
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none">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.
RefSeq:	NM_002708.4
RefSeq Size:	1488 bp
RefSeq ORF:	993 bp
Locus ID:	5499
UniProt ID:	P62136
Cytogenetics:	11q13.2
Domains:	Metallophos, PP2Ac
Protein Families:	Druggable Genome, Phosphatase
Protein Pathways:	Focal adhesion, Insulin signaling pathway, Long-term potentiation, Oocyte meiosis, Regulation of actin cytoskeleton, Vascular smooth muscle contraction
MW:	37.5 kDa
Gene Summary:	<p>The protein encoded by this gene is one of the three catalytic subunits of protein phosphatase 1 (PP1). This broadly expressed gene encodes the alpha subunit of the PP1 complex that associates with over 200 regulatory proteins to form holoenzymes which dephosphorylate their biological targets with high specificity. PP1 is a serine/threonine specific protein phosphatase known to be involved in the regulation of a variety of cellular processes, such as cell division, glycogen metabolism, muscle contractility, protein synthesis, and HIV-1 viral transcription. Increased PP1 activity has been observed in the end stage of heart failure. Studies suggest that PP1 is an important regulator of cardiac function and that PP1 deregulation is implicated in diabetes and multiple types of cancer. Three alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2020]</p>

Product images:



Circular map for RC203575



Western blot validation of overexpression lysate (Cat# [LY400954]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203575 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).