

## Product datasheet for RC212268

### PPP1A (PPP1CA) (NM\_001008709) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** PPP1A (PPP1CA) (NM\_001008709) 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:** >RC212268 representing NM\_001008709  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGC**C

ATGTCGACAGCGAGAAGCTCAACCTGGACTCGATCATCGGGCGCCTGCTGGAAGGGTCCAGGGTCTGA  
 CACCCATTGCGCCCGAGTGCAGGGCTCGCGGCCCTGGCAAGAATGTACAGCTGACAGAGAACGAGATCCG  
 CGGTCTGTGCCTGAAATCCCGGGAGATTTTCTGAGCCAGCCATTCTTCTGGAGCTGGAGGCACCCCTC  
 AAGATCTGCGGTGACATACCGCCAGTACTACGACCTTCTGCGACTATTTGAGTATGGCGTTTCCCTC  
 CCGAGAGCAACTACCTCTTTCTGGGGACTATGTGGACAGGGCAAGCAGTCCTTGAGACCATCTGCCT  
 GCTGCTGGCCTATAAGATCAAGTACCCCGAGAACTTCTTCTGCTCCGTGGGAACCACGAGTGTGCCAGC  
 ATCAACCGCATCTATGGTTTCTACGATGAGTGCAAGAGACGCTACAACATCAAATGTGGAAAACCTTCA  
 CTGACTGCTTCAACTGCCTGCCATCGCGGCCATAGTGGACGAAAAGATCTTCTGCTGCCACGGAGGCC  
 GTCCCCGGACCTGCAGTCTATGGAGCAGATTCGGCGGATCATGCGGCCACAGATGTGCCTGACCAGGGC  
 CTGCTGTGTGACCTGCTGTGGTCTGACCCTGACAAGGACGTGCAGGGCTGGGGCGAGAACGACCGTGGC  
 TCTTTTTACCTTTGGAGCCGAGGTGGTGGCAAGTTCCTCCACAAGCAGACTTGGACCTCATCTGCC  
 AGCACACCAGGTGGTGAAGACGGCTATGAGTTCTTGGCAAGCGCAGCTGGTACACTTTTCTCAGCT  
 CCCAACTACTGTGGCGAGTTTGACAATGCTGGCCATGATGAGTGTGGACGAGACCCCTCATGTGCTCTT  
 TCCAGATCTCAAGCCCGCCGACAAGAACAAGGGGAAGTACGGGCAGTTCAGTGGCCTGAACCTGGAGG  
 CCGACCCATCACCCACCCGCAATTCCGCCAAAGCCAAGAAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC212268 representing NM\_001008709  
 Red=Cloning site Green=Tags(s)

MSDSEKLNLD SIIGRLLEGSRLVTPHCAPVQGSRP GKNVQLTENEIRGLCLKSREIFLSQPILLELEAPL  
 KICGDIHGQYYDLLR LFEYGGFPPE SNYLF LGDYVDRGKQSLETICLLLAYKIKYPENFLLRGNHECAS  
 INRIYGFYDECKRRYNIKLWKTFTDCFNCLPIAAIVDEKIFCCHGGLSPDLSMEQIRRI MRPTDVPDQG  
 LLCDLLWSDPKD VQGWGENDRGVSFTFGAEVVAKFLHKHDLDLICRAHQVVEDGYEFFAKRQLVTLFSA  
 PNYCGEFDNAGAMMSVDETLMCSFQILKPADKNKGGYQF SGLNPGGRPITPPRNSAKAKK

TRTRPLEQKLISEEDLAANDILDYKDDDDKVV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6495\\_c04.zip](https://cdn.origene.com/chromatograms/mk6495_c04.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\_001008709

**ORF Size:** 1023 bp

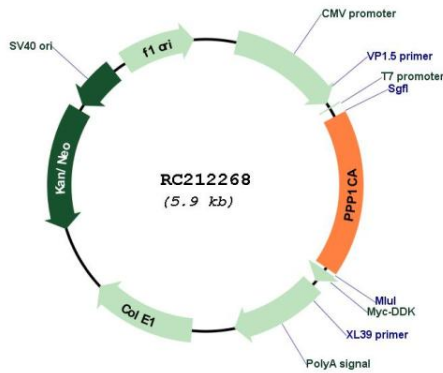
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone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

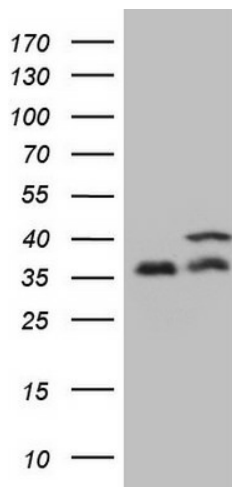
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<u>NM_001008709.1</u> , <u>NP_001008709.1</u>
<b>RefSeq Size:</b>	1521 bp
<b>RefSeq ORF:</b>	1026 bp
<b>Locus ID:</b>	5499
<b>UniProt ID:</b>	<u>P62136</u>
<b>Cytogenetics:</b>	11q13.2
<b>Protein Families:</b>	Druggable Genome, Phosphatase
<b>Protein Pathways:</b>	Focal adhesion, Insulin signaling pathway, Long-term potentiation, Oocyte meiosis, Regulation of actin cytoskeleton, Vascular smooth muscle contraction
<b>MW:</b>	38.5 kDa
<b>Gene Summary:</b>	<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>

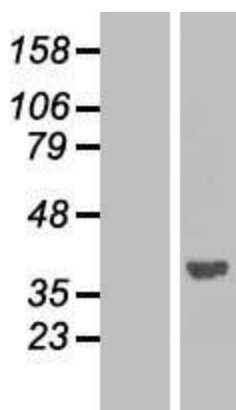
Product images:



Circular map for RC212268



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PPP1CA (Cat# RC212268, 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-PPP1CA (1:2000) (Cat# [TA808819]). Positive lysates [LY423356] (100ug) and [LC423356] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY423356]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212268 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).