

## Product datasheet for **RG203575**

### 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:	TurboGFP
Symbol:	PPP1A
Synonyms:	PP-1A; PP1A; PP1alpha; PPP1A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG203575 representing NM_002708 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCGACAGCGAGAAGCTCAACCTGGACTCGATCATCGGGCGCCTGCTGGAAGTGCAGGGCTCGCGGC  
CTGGCAAGAATGTACAGCTGACAGAGAACGAGATCCGCGGTCTGTGCCTGAAATCCCGGGAGATTTTCT  
GAGCCAGCCATTCTTCTGGAGCTGGAGGCACCCCTCAAGATCTGCGGTGACATACCGCCAGTACTAC  
GACCTTCTGCGACTATTTGAGTATGGCGGTTCCCTCCCGAGAGCAACTACCTCTTCTGGGGACTATG  
TGGACAGGGGCAAGCAGTCTTGGAGACCATCTGCCTGCTGCTGGCCTATAAGATCAAGTACCCCGAGAA  
CTTCTTCTGCTCCGTGGGAACACGAGTGTGCCAGCATCAACCGCATCTATGGTTTCTACGATGAGTGC  
AAGAGACGCTACAACATCAAACCTGTGAAAACCTTCACTGACTGTTCAACTGCCTGCCATCGCGGCCA  
TAGTGGACGAAAAGATCTTCTGCTGCCACGGAGGCCTGTCCCGGACCTGCAGTCTATGGAGCAGATTTCG  
GCGGATCATGCGGCCACAGATGTGCCTGACCAGGGCCTGCTGTGTGACCTGCTGTGGTCTGACCCTGAC  
AAGGACGTGCAGGGCTGGGGCGAGAACGACCGTGGCGTCTTTTTACCTTTGGAGCCGAGGTGGTGGCCA  
AGTTCTCCACAAGCAGACTTGGACCTCATCTGCCGAGCACACCAGGTGGTAGAAGACGGCTACGAGTT  
CTTTGCCAAGCGGCAGCTGGTGACACTTTTCTCAGCTCCCACTACTGTGGCGAGTTTGACAATGCTGGC  
GCCATGATGAGTGTGGACGAGACCCTCATGTGCTTTTCCAGATCCTCAAGCCCGCCGACAAGAACAAGG  
GGAAGTACGGGCAGTTTCACTGGCCTGAACCTGGAGGCCGACCCATCACCCACCCCGCAATTCCGCCAA  
AGCCAAGAAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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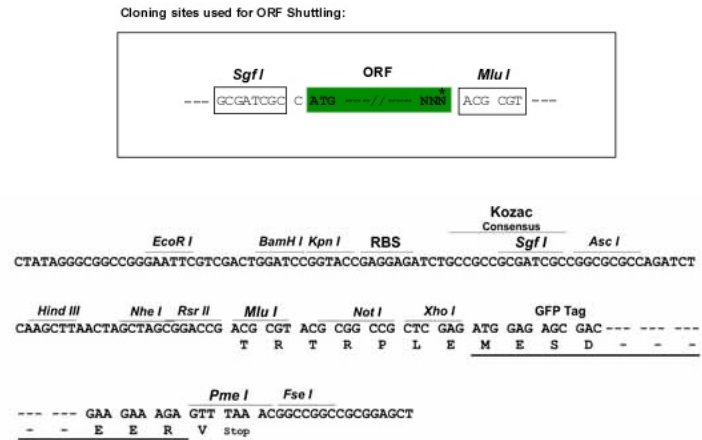
**Protein Sequence:** >RG203575 representing NM\_002708  
 Red=Cloning site Green=Tags(s)

MSDSEKLNLD SIIGRLLEVQGSRPGKNVQLTENEIRGLCLKSREIFLSQPILLELEAPLKICGDIHGQYY  
 DLLRLFEYGGFPPESNYLF LGDYVDRGKQSL ETICLLLAYKIKYPENFFLLRGNHECASINRIYGFYDEC  
 KRRYNIKLWKTFTDCFNCLPIAAIVDEKIFCCHGGLSPDLQSMEQIRRMRPDVPDQGLLCDLLWSDPD  
 KDVGWGENDRGVSFTFGAEVVAKFLHKHDLDLICRAHQVVEDGYEFFAKRQLVTLF SAPNYCGEFDNAG  
 AMMSVDETLMCSFQILKPADKNGKYGQFSGLNPGGRPIPPRNSAKAKK

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002708

**ORF Size:** 990 bp

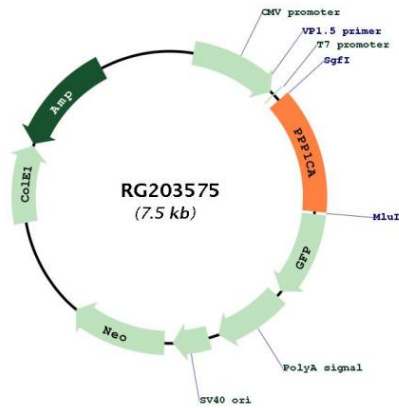
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone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

<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>RefSeq:</b>	<a href="#">NM_002708.4</a>
<b>RefSeq Size:</b>	1488 bp
<b>RefSeq ORF:</b>	993 bp
<b>Locus ID:</b>	5499
<b>UniProt ID:</b>	<a href="#">P62136</a>
<b>Cytogenetics:</b>	11q13.2
<b>Domains:</b>	Metallophos, PP2Ac
<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>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 RG203575