

Product datasheet for **SC308293**

PPP1A (PPP1CA) (NM_206873) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PPP1A (PPP1CA) (NM_206873) Human Untagged Clone
Tag:	Tag Free
Symbol:	PPP1CA
Synonyms:	PP-1A; PP1A; PP1alpha; PPP1A
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_206873 edited
 GAAGGAGAGCCAGGCCGGAAGGAGGCTGCCGGAGGGCGGGAGGCAGGAGCGGGCCAGGAG
 CTGCTGGGCTGGAGCGGGCGGCCCATGTCCGACAGCGAGAAGCTCAACCTGGACTCG
 ATCATCGGGCGCCTGCTGGAAGGTGACATACACGCCAGTACTACGACCTTCTGCGACTA
 TTTGAGTATGGCGGTTTCCCTCCCGAGAGCAACTACCTCTTTCTGGGGACTATGTGGAC
 AGGGGCAAGCAGTCCTTGGAGACCATCTGCCTGCTGCTGGCCTATAAGATCAAGTACCC
 GAGAACTTCTTCTGCTCCGTGGGAACCACGAGTGTGCCAGCATCAACCGCATCTATGGT
 TTCTACGATGAGTGCAAGAGACGCTACAACATCAAAGTGGAAAACCTTCACTGACTGC
 TTCAACTGCCTGCCCATCGCGCCATAGTGGACGAAAAGATCTTCTGCTGCCACGGAGGC
 CTGTCCCCGACCTGCAGTCTATGGAGCAGATTCGGCGGATCATGCGGCCACAGATGTG
 CCTGACCAGGGCCTGCTGTGTGACCTGCTGTTGCTGACCTGACAAGGACGTGCAGGGC
 TGGGGCGAGAACGACCGTGGCGTCTCTTTTACCTTTGGAGCCGAGGTGGTGGCCAAGTTC
 CTCCACAAGCAGCACTTGGACCTCATCTGCCGAGCACACCAGGTGGTAGAAGACGGCTAC
 GAGTTCTTTGCCAAGCGGCAGCTGGTGACACTTTTCTCAGCTCCCAACTACTGTGGCGAG
 TTTGACAAATGCTGGCGCCATGATGAGTGTGGACGAGACCCATGATGCTCTTTCCAGATC
 CTCAAGCCCGCCGACAAGAACAAGGGGAAGTACGGGCAGTTCAGTGGCCTGAACCCTGGA
 GGCCGACCCATCACCCACCCCGCAATTCGCCAAAGCCAAGAAATAGCCCCGCACACC
 ACCCTGTGCCCCAGATGATGGATTGATTGTACAGAAATCATGCTGCCATGCTGGGGGGG
 GTCACCCGACCCCTCAGGCCACCTGTCACGGGGAACATGGAGCCTTGGTGTATTTTTC
 TTTTCTTTTTTAAATGAATCAATAGCAGCGTCCAGTCCCCAGGGCTGCTTCTGCTGCTGC
 ACCTGCGGTGACTGTGAGCAGGATCCTGGGGCCGAGGCTGCAGCTCAGGGCAACGGCAGG
 CCAGGTGCTGGGTCTCCAGCCGTGCTTGGCCTCAGGGCTGGCAGCCGGATCCTGGGGCAA
 CCCATCTGGTCTCTTGAATAAAGGTCAAAGCTGGATTCTCAAAAAAAAAAAAAAAAAAAAA



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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_206873 unedited</p> <p>GTCACAATTGTATACGACTCACTATAGGCGGCCGCGNAATTCGCACCAGGGAAGAGAGCC AGGCCGGAAGGAGGCTGCCGGAGGGCGGGAGGCAGGAGCGGGCCAGGAGCTGCTGGGCTG GAGCGCGGGCGCCGCATGTCCGACAGCGAGAAGCTCAACCTGGACTCGATCATCGGGCG CCTGCTGGAAGGTGACATACACGGCCAGTACTACGACCTTCTGCGACTATTTGAGTATGG CGGTTTCCCTCCCAGAGCAACTACCTCTTTCTGGGGACTATGTGGACAGGGGCAAGCA GTCCTTTGGAGACCATCTGCCTGCTGCTGGCCTATAAGATCAAGTACCCCGAGAATTCTT CCTGCTCCGTGGGAACACGAGTGTGCCAGCATCAACCGCATCTATGGTTTCTACGATGA GTGCAAGAGACGCTACAACATCAAACCTGTGAAAAACCTTCACTGACTGCTTCAACTGCCT GCCCATCGCGCCATAGTGGACGAAAAGATCTTCTGCTGCCACGGAGGCCTGTCCCGGA CCTGCAGTCTATGGAGCAGATTCGGCGGATCATGCGGCCACAGATGTGCCTGACCAGGG CCTGCTGTGTGACCTGCTGTGGTCTGACCCTGACAGGACGTGCANGGCTGGGGCGAGAAC GACCGTGGCGTCTCTTTACCTTGGAGCCGAGGTGGTGGCCAAGTTCTCCACAGCACGA CTTGGACTCATCTGCCGAGCACACCNAGTGGTANAAGACGGCTACNAGTTCTTTGCCAAG NCGCAGCTGGTGACACTTTTCTCAGCTCCAACCTACTGTGGCGAGTTTGACATGCTGGCGC CTGATGAGTGTGGACGAGACCCTATGTGCTCTTCCATT</p>
3' Read Nucleotide Sequence:	<p>>Forward primer walk for NM_206873 unedited</p> <p>TTTGCCCTACCGCCATATGGTAGAAAGATCTTCTGCTGCCACGNAGCCTGTCCCGGAC CTGCAGTCTATGGAGCAGATTCGGCGGATCATGCGGCCACAGATGTGCCTGACCAGGGC CTGCTGTGTGACCTGCTGTGGTCTGACCCTGACAAGGACGTGCAGGGCTGGGGCGAGAAC GACCGTGGCGTCTCTTTACCTTTGGAGCCGAGGTGGTGGCCAAGTTCTCCACAAGCAC GACTTGGACCTCATCTGCCGAGCACACCAGGTGGTAGAAGACGGTACGAGTTCTTTGCC AAGCGGCAGTGGTGACACTTTTCTCAGCTCCCACTACTGTGGCGAGTTTGACAATGCT GGCGCCATGATGAGTGTGGACGAGACCCTCATGTGCTCTTCCAGATCCTCAAGCCCGCC GACAAGAACAAGGGGAAGTACGGGCAGTTCAGTGGCCTGAACCTGGAGGCCGACCCATC ACCCACCCCGCAATTCGCCAAAGCCAAGAAATAGCCCCCGCACACCACCTGTGCCCC AGATGATGGATTGATTGTACAGAAATCATGCTGCCATGCTGGGGGGGGGGTACCCCGAC CCCTCAGGCCACCTGTACGGNGAACATGGAGCCTTGGTGTATTTTCTTTTCTTTT TAATGAATCAATAGCAGCGTCCAGTCCCCCAGGGCTGCTTCTGCCTGCACCTGCGTGA CTGTGAGCAGGATCCTGGGGCCGAGCTGCAGCTCAAGGCAACCCAGCCAGTCTGG GTCCTCAGCCGTGCTTGACCTCAAGGCTGCCAGCCGATTCTGGGGGCAACCCATCTGGG TCTCTTGAATAAAGTCAAAGCTGAATCTTAAAAAAAAAAAAAAAAAACCCGAACCT TTAAATTGCGGCCCA</p>
Restriction Sites:	Please inquire
ACCN:	NM_206873
Insert Size:	1300 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
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.

RefSeq: [NM_206873.1](#), [NP_996756.1](#)

RefSeq Size: 1356 bp

RefSeq ORF: 861 bp

Locus ID: 5499

UniProt ID: [P62136](#)

Cytogenetics: 11q13.2

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

Gene Summary: 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]

Transcript Variant: This variant (2) lacks an in-frame coding exon compared to variant 1. The resulting isoform (2) lacks an internal region, as compared to isoform 1.