

Product datasheet for RC221975

Myosin Phosphatase 2 (PPP1R12B) (NM_002481) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Myosin Phosphatase 2 (PPP1R12B) (NM_002481) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Myosin Phosphatase 2
Synonyms:	MYPT2; PP1bp55
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC221975 representing NM_002481 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGGCGGAACTGGAGCACCTAGGAGGGAAGCGGGCAGAGTCGGCGCAATGCGGCGGGCAGAGCAGCTTC
GGCGCTGGCGGGGCTCGCTGACAGAGCAGGAGCCTGCGGAGCGACGAGGCGGGGCGGCAGCCGCTGAC
CAGGCGCGGGAGCCCCAGGGTCCGCTTCGAGGACGGTGTCTTTCTGGCCGCTGCTCTAGCGGGGAC
ACCGACGAGGTGAGAAAGCTTCTGGCAAGAGGTGCTGATATCAACACGGTCAACGTGGACGGCTTGACAG
CCCTGCACCAGGCATGTATTGATGAAAATTTGGACATGGTGAAGTTTCTGGTGGAGAACAGAGCCAAATGT
AAACCAGCAAGACAACGAGGGCTGGACACCCCTTCATGCAGCAGCTTCTGTGGCTATCTCAACATAGCA
GAGTATTTCAATTAATCACGGAGCCAGTGTAGGTATTGTCAATAGTGAAGGTGAAGTTCCTCTGACCTTG
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AAGAAAAGAAGAAGAGCAGCAGATGTTGCAGGATGCCCGCAGTGGCTCAACAGTGGGAAAATAGAGGAT
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GACTTTTAATTCAGGCTGGCTATGAACTCAATGTTTCAGGATTATGATGGCTGGACTCCCTCCATGCTGC
TGCACACTGGGGAGTGAAGGAGGCTTGTCCATCTGGCAGAAGCACTTTGTGACATGGATATTCGAAAT
AACTGGGCCAGACACCATTTGATGTGGCTGATGAGGGTCTCGTGGAGCATTGGAGTTGCTCCGGAAGA
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CAGAACTGAGAAGGAGGAGCAGATAAAAAGCCAGAAGCCTTTGTCAATCATTCCAACCTCTGAAAGCAAGAG
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AAAAGCTATATTAGTTCCTAGCACCCCGAAGCTCAACAGCACAAAGTGATATTGAAGAAAAGGAGAACA
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 TCCCAGGCCGACACAACAGCAGAGAAAACAGCAGACAATGTCTCTTCTAGCACCCCGCTCTGTGTGATCA
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 TCCAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAGGTTTAA

Protein Sequence:

>RC221975 representing NM_002481
 Red=Cloning site Green=Tags(s)

MAELEHLGGKRAESARMRRAEQLRRWRGSLTEQEPAERRGAGRQPLTRRGSPRVRFEDGAVFLAACSSGD
 TDEVKLLARGADINTVNVNVDGLTALHQACIDENLDMVKFLVENRANVNQDNEGWTPLHAAASCGYLNIA
 EYFINHGASVGI VNSEGEVPSDLAEEPAMKDLLEQVKKQGVLDLEQSRKEEQMLQDARQWLNISGKIED
 VRQARSGATALHVAAKGYSEVLRLLIQAGYELNVQDYDGTPLHAAAHWGVKEACSI LAEALCDMDIRN
 KLGQTPFDVADEGLVEHLELLQKKQNVLRSEKETRNKLI ESDLNSKIQSGFFKNKEKMLYEEETPKSQEM
 EEENKESSSSSSEEEGEDEASESETEKEADKKPEAFVNHSNSESKSSITEQIPAPAQNTFSASSARRFS
 SGLFNKPEEPKDESPSSWRLGLRKTGSHNMLSEVANSREPIRDRGSSIRSSSSPRISALLDNKDKEREN
 KSYISSLAPRKLNSTSDIEEKENRESAVNLVRSGSYTRQLWRDEAKGNEIPQTIAPSTYVSTYLKRTPHK
 SQADTTAEKTADNVSSSTPLCVITNRPLPSTANGVTATPVL SITGTDSSVEAREKRRSYLTPVRDEEAE
 LRKARSQARQTRRSTQGVTLTDLQEARTFSRSRAERQAQEQPREKPTDTEGLEGSPEKHEPSAVPATE
 AGEGQQPWGRSLDEEPICHRLRCPAQDPKPTTPASPSTRPSLYTSSHLLWTRNFVSPDSESETTTNTT
 TAKEMDKNENEEADLDEQSSKRLSIRERRRPKERRRGTFINFWTKDEDET DGSEEVKETWHERLSRLESG
 GSNPTTSDSYGDRASARAREAREARLATLTSRVEEDSNRDYKKEYESAL TENQKLTKLQEAQLELADI
 KSKLEKVAQQKQEKTSRDRSSVLEMEKRERRALERKMSMEMEEMKVLTELKSDNQRLKDENGALIRVISKL
 SK

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_002481

ORF Size: 2946 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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.

RefSeq: [NM_002481.4](#)

RefSeq Size: 11108 bp

RefSeq ORF: 2949 bp

Locus ID: 4660

UniProt ID: [O60237](#)

Cytogenetics: 1q32.1

Domains: ANK

Protein Families: Druggable Genome

Protein Pathways: Vascular smooth muscle contraction

MW: 110.4 kDa

Gene Summary: Myosin phosphatase is a protein complex comprised of three subunits: a catalytic subunit (PP1c-delta, protein phosphatase 1, catalytic subunit delta), a large regulatory subunit (MYPT, myosin phosphatase target) and small regulatory subunit (sm-M20). Two isoforms of MYPT have been isolated--MYPT1 and MYPT2, the first of which is widely expressed, and the second of which may be specific to heart, skeletal muscle, and brain. Each of the MYPT isoforms functions to bind PP1c-delta and increase phosphatase activity. This locus encodes both MYTP2 and M20. Alternatively spliced transcript variants encoding different isoforms have been identified. Related pseudogenes have been defined on the Y chromosome. [provided by RefSeq, Oct 2011]

