

## Product datasheet for RC202070

### PPM1A (NM\_021003) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PPM1A (NM_021003) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PPM1A
Synonyms:	PP2C-ALPHA; PP2CA; PP2Calpha
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202070 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGAGCATTTTTAGACAAGCCAAAGATGGAAAAGCATAATGCCAGGGGCAGGGTAATGGGTTGCGAT  
ATGGGCTAAGCAGCATGCAAGGCTGGCGTGTGAAATGGAGGATGCACATACGGCTGTGATCGGTTTGCC  
AAGTGGACTTGAATCGTGGTCATTCTTTGCTGTGTATGATGGGCATGCTGGTTCTCAGGTTGCCAAATAC  
TGCTGTGAGCATTGTTAGATCACATACCAATAACCAGGATTTAAAGGGTCTGCAGGAGCACCTTCTG  
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GAAGAAACATGGTGCAGATAGAAGTGGTCAACAGCTGTAGGTGTCTAATTTCTCCCAACATACTTAT  
TTCATTAAGTGTGGAGACTCAAGAGTTTTACTTTGTAGGAACAGGAAAGTTCATTTCTTACACAAGATC  
ACAAACCAAGTAATCCGCTGGAGAAAGAACGAATTCAGAAATGCAGGTGGCTCTGTAATGATTCAGCGTGT  
GAATGGCTCTCTGGCTGTATCGAGGGCCCTTGGGATTTTGATTACAAATGTGTCCATGGAAAAGGTCTCT  
ACTGAGCAGCTTGTCTCACCAGAGCCTGAAGTCCATGATATTGAAAGATCTGAAGAAGATGATCAGTTCA  
TTATCCTTGCATGTGATGGTATCTGGGATGTTATGGGAAATGAAGAGCTCTGTGATTTTGTAAAGTCCAG  
ACTTGAAGTCACTGATGACCTTGAGAAAGTTTGAATGAAGTGTGACACCTGTTTGTATAAGGGAAGT  
CGAGACAACATGAGTGTGATTTTGTCTGTTTTCCAAATGCACCCAAAGTATCGCCAGAAGCAGTGAAGA  
AGGAGGCAGAGTTGGACAAGTACCTGGAATGCAGAGTAGAAGAAATCATAAAGAAGCAGGGGGAAGGCGT  
CCCCGACTTAGTCCATGTGATGCGCACATTAGCGAGTGAGAACATCCCCAGCCTCCACCAGGGGTGAA  
TTGGCAAGCAAGAGGAATGTTATTGAAGCCGTTTACAATAGACTGAATCCTTACAAAAATGACGACACTG  
ACTCTACATCAACAGATGATATGTGG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC202070 protein sequence  
 Red=Cloning site Green=Tags(s)

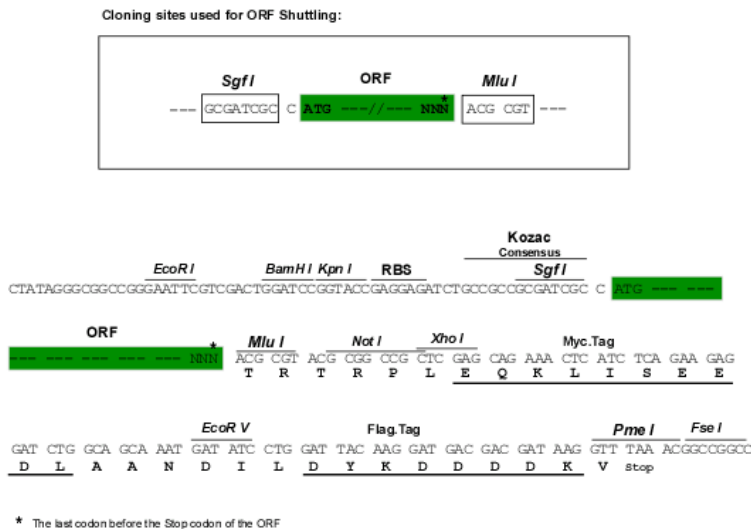
MGAFLDKPKMEKHNAQQQGNGLRYGLSSMQGWRVEMEDAHTAVIGLPSGLESWSFFAVYDGHAGSQQVAKY  
 CCEHLLDHIITNNQDFKGSAGAPSVENVKNGIRTGFLEIDEHMRVMSEKKHGADRSGSTAVGVLISPQHTY  
 FINCGDSRGLLCRNKRVHFFTDHKPSNPLEKERIQNAGGSVMIQRVNGSLAVSRALGDFDYKCVHGKGP  
 TEQLVSPEPEVHDIERSEEDDQFIILACDGIWDVMGNEELCDFVRSRLEVTDLLEKVCNEVVDTCLYKGS  
 RDNMSVILICFPNAPKVSPEAVKKEAELDKYLECRVEEIIKKQGEVGPLVHVMRTLASENIPSLPPGGE  
 LASKRNVIEAVYNRLNPYKNDTDDTSTDDMW

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6139\\_b05.zip](https://cdn.origene.com/chromatograms/mk6139_b05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_021003

**ORF Size:** 1146 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:**

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\\_021003.5](#)

**RefSeq Size:** 8210 bp

**RefSeq ORF:** 1149 bp

**Locus ID:** 5494

**UniProt ID:** [P35813](#)

**Cytogenetics:** 14q23.1

**Domains:** PP2C

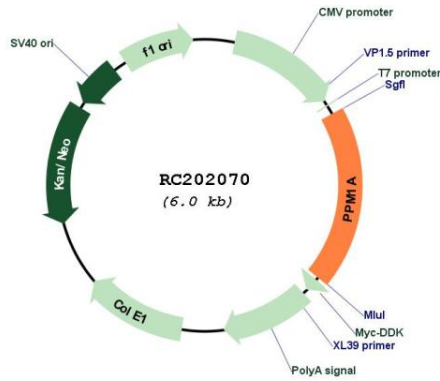
**Protein Families:** Druggable Genome, Phosphatase

**Protein Pathways:** MAPK signaling pathway

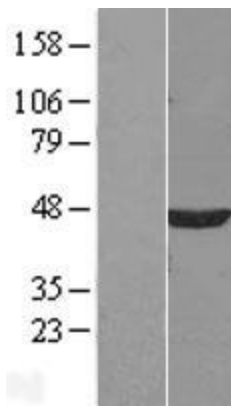
**MW:** 42.4 kDa

**Gene Summary:** The protein encoded by this gene is a member of the PP2C family of Ser/Thr protein phosphatases. PP2C family members are known to be negative regulators of cell stress response pathways. This phosphatase dephosphorylates, and negatively regulates the activities of, MAP kinases and MAP kinase kinases. It has been shown to inhibit the activation of p38 and JNK kinase cascades induced by environmental stresses. This phosphatase can also dephosphorylate cyclin-dependent kinases, and thus may be involved in cell cycle control. Overexpression of this phosphatase is reported to activate the expression of the tumor suppressor gene TP53/p53, which leads to G2/M cell cycle arrest and apoptosis. Three alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Jul 2008]

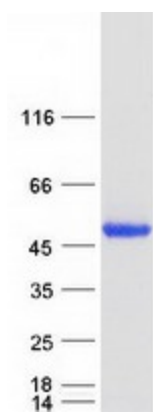
Product images:



Circular map for RC202070



Western blot validation of overexpression lysate (Cat# [LY402820]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202070 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PPM1A protein (Cat# [TP302070]). The protein was produced from HEK293T cells transfected with PPM1A cDNA clone (Cat# RC202070) using MegaTran 2.0 (Cat# [TT210002]).