

## Product datasheet for **RC202562**

### **MPP8 (MPHOSPH8) (NM\_017520) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MPP8 (MPHOSPH8) (NM_017520) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MPP8
Synonyms:	HSMPP8; mpp8; TWA3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC202562 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAGCAGGTTGCGGAGGGAGCAAGGGTGACCGCAGTCCCTGTGTGAGTCCGACAGCACTGAGGAGT  
 TGGCCGAAGTCTGAAGAAGGAGTTGGAGTAGTGGGCGAAGATAATGACGCAGCCGCGAGAGGAGCGGAGGC  
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**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC202562 protein sequence  
 Red=Cloning site Green=Tags(s)

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MEQVAEGARVTAVPVSAADSTEELAEVEEGVGVGEDNDAARGAEAFGDSEEDGEDVFEVEKILDMKTE
GGKVL YKVRWKGYTSDDDTWEPEIHLLEDCKEVLLFRKKAENKAKAVRKDIQRLSLNNDIFEANSDDQ
QSETKEDTSPK KKKKKLRQREKSPDDLK KKKAKAGLKD KSKPDLESSLESLVFDLRTKKRISEAKEEL
KESKKPKKDEVKETKELKKVKKGEIRD LKTKTREDPKENRKT KKEKFVESQVSESSVLNDSPFPEDDSE
GLHSDSREEKQNTKSARERAGQDMGLEHGF EKPLDSAMSAEEDTDVRGRRKKTPRKAEDTRENKLENK
NAFLEKKTVPKKQRNQDRSKSAAELEK LMPVSAQTPKGRRLSGEERGLWSTDSAEEDKETKRNESKEYQ
KRHSDSKEEKGRKEPKGLKTLKEIRNAFDL FKLTPEEKNDVSEN NRKREEIPLDFKITDDHKTKENKQSL
KERRNRDETDTWAYIAAEGDQEVLD SVCQADENS DGRQQILSLGMDLQLEWMKLEDFQKHLDGKDNFA
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QKNGTTALIHAAEKNFLTTVAILLEAGAFVNVQSQNGETALMKACKRGN SDIVRLVIECGADCNILSKHQ
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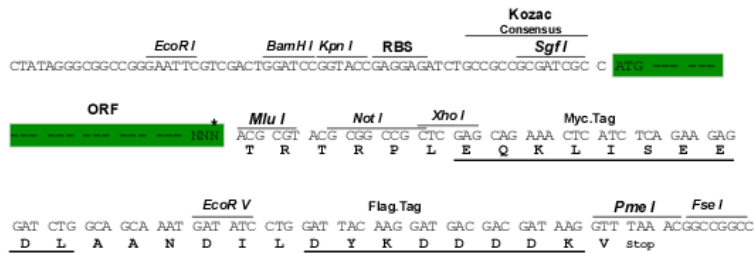
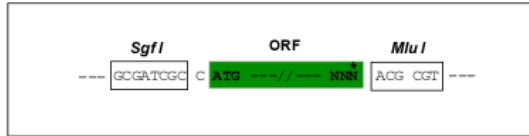
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6555\\_h05.zip](https://cdn.origene.com/chromatograms/mk6555_h05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:

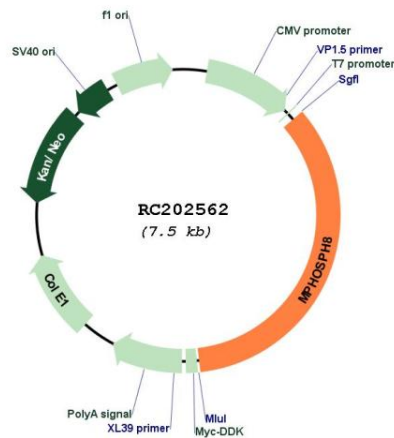


\* The last codon before the Stop codon of the ORF

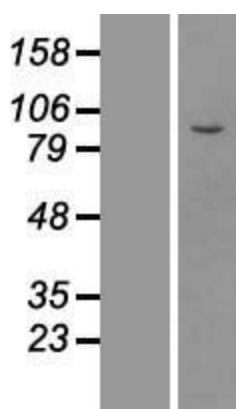
<b>ACCN:</b>	NM_017520
<b>ORF Size:</b>	2580 bp
<b>OTI Disclaimer:</b>	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), 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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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_017520.4</a>
<b>RefSeq Size:</b>	4281 bp
<b>RefSeq ORF:</b>	2583 bp
<b>Locus ID:</b>	54737
<b>UniProt ID:</b>	<a href="#">Q99549</a>
<b>Cytogenetics:</b>	13q12.11
<b>MW:</b>	97.2 kDa

**Gene Summary:**

Heterochromatin component that specifically recognizes and binds methylated 'Lys-9' of histone H3 (H3K9me) and promotes recruitment of proteins that mediate epigenetic repression (PubMed:20871592, PubMed:26022416). Mediates recruitment of the HUSH complex to H3K9me3 sites: the HUSH complex is recruited to genomic loci rich in H3K9me3 and is required to maintain transcriptional silencing by promoting recruitment of SETDB1, a histone methyltransferase that mediates further deposition of H3K9me3, as well as MORC2 (PubMed:26022416, PubMed:28581500). Binds H3K9me and promotes DNA methylation by recruiting DNMT3A to target CpG sites; these can be situated within the coding region of the gene (PubMed:20871592). Mediates down-regulation of CDH1 expression (PubMed:20871592). Also represses L1 retrotransposons in collaboration with MORC2 and, probably, SETDB1, the silencing is dependent of repressive epigenetic modifications, such as H3K9me3 mark. Silencing events often occur within introns of transcriptionally active genes, and lead to the down-regulation of host gene expression (PubMed:29211708). The HUSH complex is also involved in the silencing of unintegrated retroviral DNA by being recruited by ZNF638: some part of the retroviral DNA formed immediately after infection remains unintegrated in the host genome and is transcriptionally repressed (PubMed:30487602). [UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for RC202562



Western blot validation of overexpression lysate (Cat# [LY413733]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202562 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).