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Product datasheet for RR200931

Mpp5 (NM_001108034) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mpp5 (NM_001108034) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mpp5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RR200931 representing NM_001108034
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACAACATCGTATATGAATGGGCATGTGACAGAGGAATCAGACAGCGGAATAAAAAATCTTGGTCTTG
CATCACCAGAGGAACATCCGAAACACAGAGAGATGGCTGTTGACTGCCCTGGAGATTTGGGCACCAGATT
GATGCCAGTGCGAAGAAGTGCACAGTTAGAGCGCATTCGACAGCAACAGGAGGATATGAGACGTAGGCGT
GAAGAAGAAGGGAAAAAGCAAGAACTTGACCTAAATTCTTCCATGAGACTTAAGAAACTAGCTCAAATTC
CTCCGAAGACTGGAATAGATAACCCTATATTTGACACAGAAGAAGGAATTGTTTTAGAAAGTCCTCACTA
TGCTGTGAAAATATTAGAAGTTGAAGACTTGTTCTCTTCACTTAAACATATCCAGCACACTTTGGTTGAT
TCTCAGAGCCAGGAGGATATTTCACTGCTTTTACAGCTTGTACAAAATAGAGATTTTCAGAATGCATTCA
AGATACACAATGCTGTCACAGTGCACATGAACAAGGCCAGCCCTCCGTTTCCTCTTATCGCCAATGTACA
AGACCTTGTACAAGAGGTACAAACTGTCTTAAAGCCAGTCCATCAGAAGGAAGGACAAGAATTAACTGCT
TTGTTAAATGCTCCACATATTCAGGCACTTTTACTGGCCCATGATAAGGTTGCTGAGCAGGAAATGCAGC
TAGAGCCCATAACAGATGAGAGAGTCTATGAAAGTATCGGCCATTATGGGGGAGAAACTGTAAAAATAGT
TCGTATAGAAAAGGCTCGGGATATTCCATTGGGTGCCACGGTTCGTAATGAGATGGATTCTGTCATCATA
AGTCGGATAGTGAAAGGAGGCGCGGCAGAGAAGAGCGGGCTTCTGCACGAAGGAGACGAAGTCCTAGAGA
TCAATGGCATCGAAATCCGGGGCAAGGACGTCAATGAGGTTTTTGACTTGTTGTCTGATATGCACGGTAC
GTTGACATTTGTTCTGATTCCTAGTCAACAGATCAAGCCTCCTCCCGCCAAAGAAACTGTAATCCACGTG
AAAGCTCATTTTGACTATGACCCCTCAGATGACCCTTATGTTCCCTGTCGAGAGTTAGGACTGTCTTTTC
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CGAAGACAATCAGCCTCTAGCTGGACTTGTTCCAGGGAAAAGTTTTCAGCAGCAAAGGGAAGCCATGAAG
CAAACTATAGAAGAAGATAAGGAGCCAGAAAAATCAGGAAAACTATGGTGTGCAAAGAAGAATAAAAAGA
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CAACTCGGAATAGGCGAGACCACGAAGTAGCTGGGAGAGATTACCACTTTGTTTCACGGCAAGCATTTGA
AGCAGATATAGCAGCTGGCAAGTTCATTGAACATGGTGAATTTGAGAAAAACCTGTATGGAACCAGCATA
GATTCTGTACGACAAGTAATCAACTCTGGCAAAATATGTCTTTTAAGTCTTCGAGCACAGTCCTTGAAGA
CCCTCCGGAATTCAGATTTGAAACCATACATCATCTTCATTGCACCACCTTCACAAGAGAGACTTCGGGC
GTTGTTAGCCAAGGAAGGCAAGAACCCAAAGCCGGAAGAATTAAGGGAGATTATTGAGAAGACGAGAGAG
ATGGAACAGAACAACGGCCACTACTTCGACACTGCGATTGTGAATTCAGATCTTGATAAAGCCTATCAGG
AACTGCTTAGGCTTATTAACAAACTGGACACCGAGCCTCAGTGGGTGCCATCCACCTGGCTAAGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

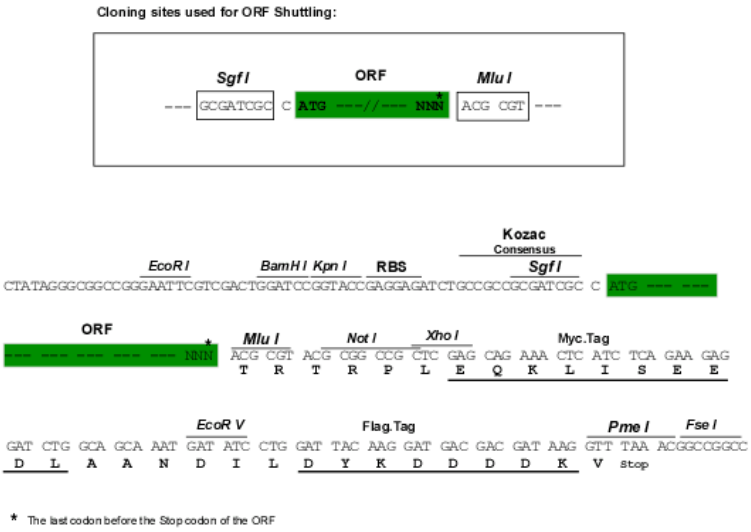
>RR200931 representing NM_001108034
Red=Cloning site Green=Tags(s)

MTTSYMNGHVTEESDSGIKNLGLASPEEHPKHREMAVDCPGDLGTRLMPVRRSAQLERIRQQQEDMRRRR
EEEGKKQELDLNSSMRLKKLAQIPPKTGIDNPIFDTEEGIVLESPHYAVKILEVEDLFSSLKHIQHTLVD
SQSQEDISLLLQLVQNRDFQNAFKIHNAVTVHMNKASPPFPLIANVQDLVQEVQTVLKPVHQKEGQELTA
LLNAPHIQALLLAHDKVAEQEMQLEPITDERVYESIGHYGGETVKIVRIEKARDIPLGATVRNEMDSVII
SRIVKGGAAEKSGLLHEGDEVLEINGIEIRGKDVNEVFDLLSDMHGTLTFVLIPSQQIKPPPAKETVIHV
KAHFDYDPSDDPYVPCRELGLSFQKGDILHVISQEDPNWWQAYREGDEDNQPLAGLVPGKSFQQQREAMK
QTIEEDKEPEKSGKLWCAKKNKKKRKKVLYNANKNDDYDNEEILTYEEMSLYHQPANRKRPIILIGPQNC
GQNELRQRLMNKEKDRFASAVPHTTRNRRDHEVAGRDYHFVSRQAFEADIAAGKFIEHGEFEKNLYGTSI
DSVRQVINSGKICLLSLRAQSLKTLRNSDLKPYIIFIAPPSQERLRALLAKEGKNPKPEELREIIEKTRE
MEQNNGHYFDTAIVNSDLDKAYQELLRLINKLDTEPQWVPSTWLR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001108034

ORF Size: 2025 bp

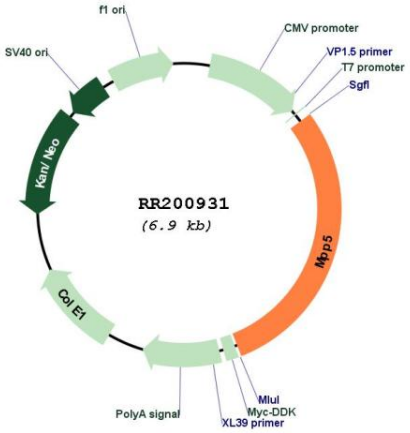
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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_001108034.1, NP_001101504.1
RefSeq Size:	2703 bp
RefSeq ORF:	2028 bp
Locus ID:	314259
UniProt ID:	B4F7E7
Cytogenetics:	6q24
MW:	77.2 kDa
Gene Summary:	Plays a role in tight junction biogenesis and in the establishment of cell polarity in epithelial cells (By similarity). Also involved in adherens junction biogenesis by ensuring correct localization of the exocyst complex protein EXOC4/SEC8 which allows trafficking of adherens junction structural component CDH1 to the cell surface (By similarity). Plays a role through its interaction with CDH5 in vascular lumen formation and endothelial membrane polarity (By similarity). Required during embryonic and postnatal retinal development (By similarity). Required for the maintenance of cerebellar progenitor cells in an undifferentiated proliferative state, preventing premature differentiation, and is required for cerebellar histogenesis, fissure formation and cerebellar layer organization (By similarity). Plays a role in the radial and longitudinal extension of the myelin sheath in Schwann cells (By similarity). May modulate SC6A1/GAT1-mediated GABA uptake by stabilizing the transporter (By similarity). May play a role in the T-cell receptor-mediated activation of NF-kappa-B (By similarity). Required for localization of EZR to the apical membrane of parietal cells and may play a role in the dynamic remodeling of the apical cytoskeleton (By similarity). Required for the normal polarized localization of the vesicular marker STX4 (By similarity). Required for the correct trafficking of the myelin proteins PMP22 and MAG (PubMed:20237282). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR200931