

Product datasheet for **MR222682**

Mpp5 (NM_019579) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mpp5 (NM_019579) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mpp5
Synonyms:	3830420B02Rik; AI255216; AI644496; Pals1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>MR222682 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGACAACATCATATATGAATGGGCATGTAAACAGAGGAATCAGACAGCGGAATAAAAAATCTTGATCTTG
CATCACCAGAGGAATATCCGAAGCACCGAGAGATGGCTGTTGACTGCCCTGGAGATTTGGGCACCAGAAT
GATGCCAGTGCGAAGAAGTGCACAGTTAGAGCGGATTCGACAACAACAGGAGGATATGAGACGTAGGCGC
GAAGAGGAAGGGAAAAAGCAAGAAGCTTACCTAAATTCTCCATGAGACTTAAGAACTAGCTCAAATTC
CTCCAAAGACTGGAATAGATAACCTATATTTGACACGGAAGAAGGAATTGTTTTAGAAAGTCTCACTA
TGCTGTGAACATATTAGACGTTGAAGACTTGTCTCTTCACTTAAACACATCCAACACACTTTGTTGAT
TCTCAGAGCCAGGAGGATATCTCACTGCTTTACAGCTTGTACAAAACAGAGATTTTCAGAATGCATTCA
AGATACACAATGCTGTCACAGTACACATGAGCAAGGCCAGCCCTCCGTTTCTCTTATCGCCAATGTACA
AGACCTTGTACAAGAGGTACAACTGTCTTAAAGCCAGTCCATCAGAAGGAAGGACAAGAAGTAAGTCC
TTGTTGAAATGCTCCACATATTCAGGCACCTTTACTGGCCCATGATAAGGTTGCTGAGCAGGAAATGCAGC
TAGAGCCCATACAGATGAGAGAGTTTATGAAAGTATCGGCCATTACGGGGGAGAACTGTAAAAATAGT
TCGTATAGAAAAGGCTCGGGATTTCCATTGGGTGCCACAGTTTCGTAATGAAATGGATTCTGTCATCATA
AGCCGGATAGTGAAGGAGGCGCCGAGAGAAGAGTGGCTCCTGCACGAAGGAGACGAAGTTCTGGAGA
TCAACGGCATTGAAATCCGGGGCAAGGATGTCAATGAGTTTTGACTTGTGTCTGATATGCATGGTAC
TTTGACATTTGTTCTGATTCTAGTCAACAGATCAAGCCCCCTCCTGCCAAAGAACTGTAAATCCATGTG
AAAAAGGAGATATACTTCATGTGATCAGTCAAGAAGATCCAAATGGTGGCAGGCCTATAGAGAGGGAGA
CGAAGATAATCAGCCTTAGCTGGACTTGTCCAGGCAAAAAGCTTTCAGCAGCAAAGGGAAGCCATGAAG
CAAATATAGAAGAAGATAAGGAGCCAGAGAAATCAGGAAAAGTGTGGTGTGCAAAGAAGAATAAAAAGA
AGAGGAAAAAGGTTTTATATAATGCCAATAAAAAATGATGATTATGACAATGAAGAGATCTTAACGTATGA
GGAAATGTCACTTTATCACCAGCCAGCAAATAGGAAAAGACCTATCATCTTGATCGGTCCACAGAAGTGT
GGCCAGAATGAAGTGGCCAGAGACTAATGAATAAGGAAAAGACCGCTTTCATCTGCCGTTCTCATA
CAACTCGGAATAGGCGAGACCATGAAGTAGCTGGGAGAGATTACCACTTTGTTTCTCGGCAAGCATTGGA
AGCAGACATAGCAGCTGGCAAGTTCATTGAACATGGTGAATTTGAGAAAAATCTGTATGGAACCAGCATA
GACTCTGTACGACAAGTAATCAACTCTGGCAAGATATGTCTCTTAAGTCTTCGCACACAGTCTTGAAGA
CCCTCCGGAATCAGATTTGAAACCATATATCATCTTCATTGCACCACCTTCACAAGAGAGACTTCGGGC
GTTGTTAGCCAAGGAAGGCAAGAACCCAAAGCCTGAAGAATTAAGGGAGATCATTGAGAAGCAGAGAGAG
ATGGAGCAGAACAACGGACACTACTTCGACACTGCAATTGTGAATTCAGATCTTGATAAAGCCTATCAGG
AATTGCTTAGGCTCATTAACTGGATACTGAACCTCAGTGGTGCCATCCACCTGGCTAAGG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR222682 protein sequence
Red=Cloning site Green=Tags(s)

MTTSYMNHGVTEESDSGIKNLDLASPEEYPKHREMAVDCPGDLGTRMMPVRRSAQLERIRQQQEDMRRRR
 EEEGKKQELDLNSSMRLKLAQIPPKTGIDNPIFDTEEGIVLESPHYAVNILDVEDLFSSLKHIQHTLVD
 SQSQEDISLLQLVQNRDFQNAFKIHNAVTVHMSKASPPFPLIANVQDLVQEVQTVLKPVHQEGQELTA
 LLNAPHIQALLLAHDKVAEQEMQLEPITDERVYESIGHYGGGETVKIVRIEKARDIPLGATVRNEMDSVII
 SRIVKGGAAEKSGLLHEGDEVLEINGIEIRGKDVNEVFDLLSDMHGTLTFVLIPSQQIKPPPAKETVIHV
 KAHFDYDPSDDPYVPCRELGLSFQKGDILHVISQEDPNWWQAYREGDEDNQPLAGLVPGKSFQQQREAMK
 QTIEEDKEPEKSGKLWCAKKNKKRKKVLYNANKNDYDNEEILTYEEMSLYHQPANRKRPIILIGPQNC
 GQNELRQRLMNKEKDRFASAVPHTTRNRDHEVAGRDYHFVSRQAFEADIAAGKFIIEHGEFENLYGTISI
 DSVRQVINSKGICLLSLRTQSLKTLRNSDLKPYIIFIAPPSQERLRALLAKEGKNPKPEELREIIIEKTRE
 MEQNNGHYFDTAIVNSDLKAYQELLRLINKLDTEPQWVPSTWLR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_019579

ORF Size: 2028 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_019579.3](#), [NP_062525.1](#)

RefSeq Size: 5529 bp

RefSeq ORF: 2028 bp

Locus ID: 56217

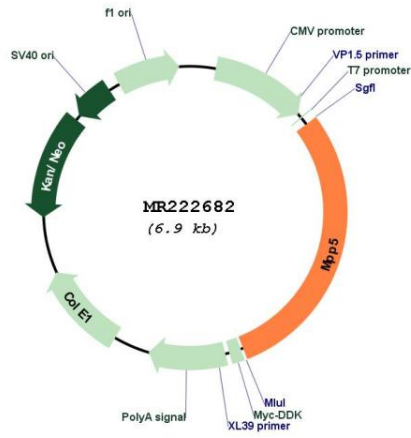
UniProt ID: [Q9JLB2](#)

Cytogenetics: 12 C3

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 (PubMed:17182851, PubMed:20237282). 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 (PubMed:22398208). 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 (PubMed:26657772). Plays a role in the radial and longitudinal extension of the myelin sheath in Schwann cells (PubMed:20237282). May modulate SC6A1/GAT1-mediated GABA uptake by stabilizing the transporter (PubMed:15234345). 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 (PubMed:15677456). Required for the normal polarized localization of the vesicular marker STX4 (PubMed:20237282). Required for the correct trafficking of the myelin proteins PMP22 and MAG (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR222682