

## Product datasheet for **MG222682**

### **Mpp5 (NM\_019579) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Mpp5 (NM_019579) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mpp5
Synonyms:	3830420B02Rik; AI255216; AI644496; Pals1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>MG222682 representing NM\_019579  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGACAACATCATATATGAATGGGCATGTAACAGAGGAATCAGACAGCGGAATAAAAAATCTTGATCTTG  
CATCACCAGAGGAATATCCGAAGCACCGAGAGATGGCTGTTGACTGCCCTGGAGATTTGGGCACCAGAAT  
GATGCCAGTGCGAAGAAGTGCACAGTTAGAGCGGATTCGACAACAACAGGAGGATATGAGACGTAGGCGC  
GAAGAGGAAGGGAAAAAGCAAGAAGCTTACCTAAATTCTCCATGAGACTTAAGAACTAGCTCAAATTC  
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TGCTGTGAACATATTAGACGTTGAAGACTTGTCTCTTCACTTAAACACATCCAACACACTTTGTTGAT  
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CCCTCCGGAATCAGATTTGAAACCATATATCATCTTCATTGCACCACCTTCACAAGAGAGACTTCGGGC  
GTTGTTAGCCAAGGAAGGCAAGAACCCTGAAGAATTAAGGGAGATCATTGAGAAGCAGAGAGAG  
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AATTGCTTAGGCTCATTAACTGGATACTGAACCTCAGTGGTGCCATCCACCTGGCTAAGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG222682 representing NM\_019579  
 Red=Cloning site Green=Tags(s)

MTTSYMNGHVTEESDSGIKNLDLASPEEYPKHREMAVDCPGDLGTRMMPVRRSAQLERIRQQQEDMRRRR  
 EEEGKKQELDLNSSMRLKLAQIPPKTGIDNPIFDTEEGIVLESPHYAVNILDVEDLFSSLKHIQHTLVD  
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 KAHFDYDPSDDPYVPCRELGLSFQKGDILHVISQEDPNWWQAYREGDEDNQPLAGLVPGKSFQQQREAMK  
 QTIEEDKEPEKSGKLWCAKKNKKRKKVLYNANKNDYDNEEILTYEEMSLYHQPANRKRPIILIGPQNC  
 GQNELRQRLMNKEKDRFASAVPHTTRNRDHEVAGRDYHFVSRQAFEADIAAGKFIIEHGEFENLYGTISI  
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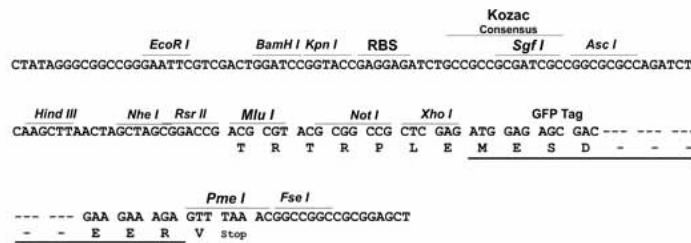
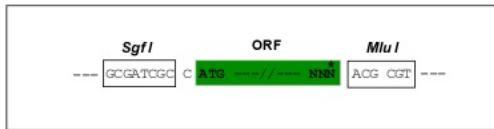
TRTRPLE - GFP Tag - V

Restriction Sites:

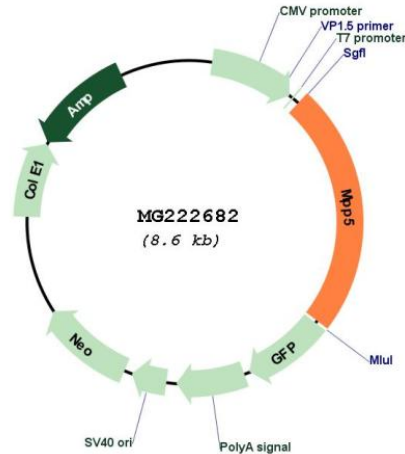
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



## Plasmid Map:



ACCN: NM\_019579

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\\_019579.3](#), [NP\\_062525.1](#)

RefSeq Size: 5529 bp

RefSeq ORF: 2028 bp

Locus ID: 56217

UniProt ID: [Q9JLB2](#)

Cytogenetics: 12 C3

**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]