

## Product datasheet for **MG211861**

### Inpp1 (NM\_010567) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Inpp1 (NM\_010567) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Inpp1  
**Synonyms:** 51C; SHIP2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG211861 representing NM\_010567  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCTCAGTGTGTGGGACACCGAGTCCCGGGGTGCGCTAGGCAGCCCGGCCAGCCTGGTATCACC  
GTGACCTGAGCCGCGCTGCTGCGGAGGAGCTCCTGGCTCGGGCGGGCCGATGGCAGCTTCTGGTGGC  
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ATTCTGCCAGATGGAGAGGATTTCTGGCTGTGCAGACCTCACAGGTGTTCTGTGCGTCGCTTCCAGA  
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CGTGACTCCAGGAGGACTGGACAACCTTACACATGACCGGATCCGGCAGCTCATTAAATCCCAGCGTG  
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AAGGAGCTTACAGATCTGGATTACCGTCCGATTGCTATGCAGTCACTATGGAACATCAAGGTGGCTGTGT  
TGGTCAAGCCAGAACATGAGAATCGCATCAGCCACGTCAGTACGTCCAGTGTGAAGACTGGTATCGCCAA  
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AGCTGGGGTGCAGGATCCTGCTACAAGCGCCTTCTTCTGGACACCTTGACGCTCAGCAAA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >MG211861 representing NM\_010567  
 Red=Cloning site Green=Tags(s)

MASVCGTPSPGGALGSPAPAWYHRDL SRAAAEELLARAGRDGSFLVRDSESVAGAFALCVLYQKHVHTYR  
 ILPDGEDFLAVQTSQGVVRRFQTLGEL IGLYAQPNQGLVCAALLPVEGEREPDPPDDRASDVEDEKPP  
 LPPRSGSTISAPVGPSSPLPTPETPTTPAAESTPNGLSTVSHEYLKGSYGLDLEAVRGGASNLPHLTRT  
 LVTSCRRLHSEVDKVL SGLEILSKVFDQQSSPMVTRLLQQQSLPQTGEQELESVLKLSVLKDFLSGIQK  
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 RDSQEDWTTFTHDIRQLIKSQRVQNKLGVVFEKEKDRTRKDFIFVSARKREAF CQLLQLMKNRHSKQD  
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 KELTDLDYRIAMQSLWNIVAVLVKPEHENRISHVSTSSVKTGIANTLGNKGAVGV SFMNGTSFGFVN  
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 THII CNSYGTDDIVTSDHSPVFGTFE VGVTSQFISKKGLSKTSDQAYIEFESIEAIVKTASRTKFFIEF  
 YSTCLEEYKKS FENDAQSSDNINFLKVQWSSRQLPTLKPILADIEYLQDQHLLLVKSMGDGYESYGECVV  
 ALKSMIGSTAQQFLTFLSHRGEETGNIRGSMKVRVPTERLGTRERLYEWISIDKDDTGAKSKVPSVSRGS  
 QEHRSGSRKPASTETSCPLSKLFEEPEKPPPTGRPPAPPRAVPREEPLNPKLSEGTS EQE GVAAPPKN  
 SFNNPAYVYVLEGVPHQLLPLEPPSLARAPLPATKNKVAITVPAPQLGRHRTPRVGE GSSDSDSGGTL P  
 PPDFPPPLPDS AIFLPPNLDPLSMPVVRGRSGGEARGPPPKAHPRPPLPGTSPASTFLGEVASGDDR  
 SCSVLQMAKTLSEVDYAPGPGRSALLPNLELQPPRGP SDYGRPLSFP PPRIRESIQEDLAEEAPCPQGG  
 RASGLGEAGMGAWLRAIGLEREYEEGLVHNGWDDLEFLSDITEEDLEEAGVQDPAHKRLLLDLTLQLSK

TRTRPLE - GFP Tag - V

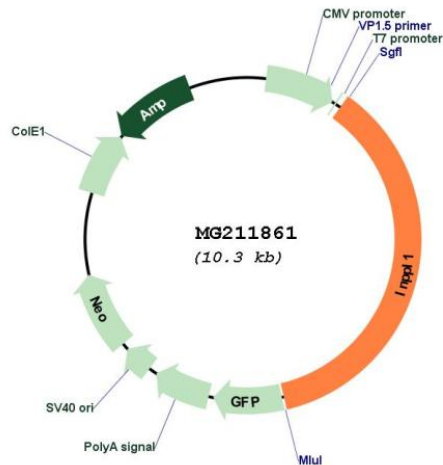
Restriction Sites:

SgfI-MluI

Cloning Scheme:



## Plasmid Map:



ACCN: NM\_010567

ORF Size: 3771 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\\_010567.2](#), [NP\\_034697.2](#)

RefSeq Size: 5012 bp

RefSeq ORF: 3774 bp

Locus ID: 16332

UniProt ID: [Q6P549](#)

**Cytogenetics:** 7 E2

**Gene Summary:** Phosphatidylinositol (PtdIns) phosphatase that specifically hydrolyzes the 5-phosphate of phosphatidylinositol-3,4,5-trisphosphate (PtdIns(3,4,5)P3) to produce PtdIns(3,4)P2, thereby negatively regulating the PI3K (phosphoinositide 3-kinase) pathways (PubMed:10958682). Plays a central role in regulation of PI3K-dependent insulin signaling, although the precise molecular mechanisms and signaling pathways remain unclear. While overexpression reduces both insulin-stimulated MAP kinase and Akt activation, its absence does not affect insulin signaling or GLUT4 trafficking. Confers resistance to dietary obesity. May act by regulating AKT2, but not AKT1, phosphorylation at the plasma membrane. Part of a signaling pathway that regulates actin cytoskeleton remodeling. Required for the maintenance and dynamic remodeling of actin structures as well as in endocytosis, having a major impact on ligand-induced EGFR internalization and degradation. Participates in regulation of cortical and submembraneous actin by hydrolyzing PtdIns(3,4,5)P3 thereby regulating membrane ruffling (By similarity). Regulates cell adhesion and cell spreading (PubMed:29749928). Required for HGF-mediated lamellipodium formation, cell scattering and spreading. Acts as a negative regulator of EPHA2 receptor endocytosis by inhibiting via PI3K-dependent Rac1 activation. Acts as a regulator of neuritogenesis by regulating PtdIns(3,4,5)P3 level and is required to form an initial protrusive pattern, and later, maintain proper neurite outgrowth. Acts as a negative regulator of the FC-gamma-RIIA receptor (FCGR2A). Mediates signaling from the FC-gamma-RIIB receptor (FCGR2B), playing a central role in terminating signal transduction from activating immune/hematopoietic cell receptor systems. Involved in EGF signaling pathway. Upon stimulation by EGF, it is recruited by EGFR and dephosphorylates PtdIns(3,4,5)P3. Plays a negative role in regulating the PI3K-PKB pathway, possibly by inhibiting PKB activity. Down-regulates Fc-gamma-R-mediated phagocytosis in macrophages independently of INPP5D/SHIP1. In macrophages, down-regulates NF-kappa-B-dependent gene transcription by regulating macrophage colony-stimulating factor (M-CSF)-induced signaling. May also hydrolyze PtdIns(1,3,4,5)P4, and could thus affect the levels of the higher inositol polyphosphates like InsP6. Involved in endochondral ossification (By similarity). [UniProtKB/Swiss-Prot Function]