

## Product datasheet for MC224080

### Inpp1 (NM\_010567) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Inpp1 (NM\_010567) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Inpp1  
**Synonyms:** 51C; SHIP2  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC224080 representing NM\_010567  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGGCCTCAGTGTGTGGACACCGAGTCCCGGGGTGCGCTAGGCAGCCCGGCCAGCCTGGTATCACC  
 GTGACCTGAGCCGCGCTGCTGCGGAGGAGCTCCTGGCTCGGGCGGGCCGATGGCAGCTTCTGGTGCC  
 AGATAGCGAGAGCGTGGCGGGGCTTCGCACTCTGCGTCTGTATCAAAAGCACGTGCACACCTACCGC  
 ATTCTGCCAGATGGAGAGGATTTCTGGCTGTGCAGACCTCACAGGGTGTTCCTGTGCGTTCGCTTCCAGA  
 CCCTGGGTGAGCTTATAGGCCTATATGCCAGCCCAACCAGGGTCTTGTTTGTGCCCTGCTGCTGCCTGT  
 AGAGGGGGAGAGAGAGCCAGACCACAGATGACCGAGATGCCTCAGATGTGGAGGACGAGAAGCCCCCA  
 CTACCCCGCGCTCTGGCTCTACCAGCATTTCTGCCCTGTGGGGCCAGCAGCCCCCTGCCGACTCCCG  
 AGACTCCCAACTCCAGCAGCTGAGAGCACTCCTAATGGACTCAGCACTGTGTCACATGAGTATCTGAA  
 GGGCAGCTACGGGCTGGACCTGGAGGCTGTACGAGGTGGAGCCAGCAACTGCCACATCTACCAGAACC  
 CTTGTACCTCGTGCCGAAGGCTACACAGCGAGGTGGACAAGGTCCTGTGAGGCTGGAGATCCTGTGCGA  
 AGGTGTTTGACCAGCAGAGCTCGCCATGGTGACCCGCTTTTACAGCAGCAGAGCTTACCACAGACTGG  
 AGAGCAGGAGCTGGAGAGCCTTGTGCTGAAGCTATCTGTGTTAAAGGACTTCTGTGAGGATCCAGAAG  
 AAGGCCCTAAAGGCACTGCAGGACATGAGCTCCACAGCGCTCCGGCTCCATTGCAGCCCTCCATACGCA  
 AGGCCAAGACCATCCCCGTGAGGCCTTTGAGGTGAAGCTGGATGTAACACTGGGTGACCTGACCAAGAT  
 TGGGAAGTCCCAGAAGTTCACGCTGAGTGTGGATGTCGAGGGTGGGAGGCTGGTTCTGCTGAGGAGACAG  
 CGTGACTCCCAGGAGGACTGGACAACCTTACACATGACCGGATCCGGCAGCTCATTAAATCCCAGCGTG  
 TGCAGAACAAGCTGGGTGTTGTGTTTAAAAGGAGAAAGATCGGACCCAGCGCAAGGACTTCATCTTTGT  
 CAGTGCCCGAAACGAGAAGCCTTCTGCCAGCTCCTGCAGCTCATGAAGAACAGGCACTCCAAGCAGGAC  
 GAGCCCGACATGATCTGTCTTCATAGGCACCTGGAACATGGGAAGTGTACCACCACCCAAAAACGTGA  
 CATCTTGGTTACATCAAAGGACTGGGAAAGCTCTGGATGAGGTACAGTGACTATACCCACGATAT  
 CTATGTCTTTGGACTCAGGAGAACTCAGTGGGTGACAGAGAGTGGCTGGATCTGCTGCGTGGGGCCCT  
 AAGGAGCTTACAGATCTGGATTACCGTCCGATTGCTATGCAGTCACTATGGAACATCAAGGTGGCTGTGT



TGGTCAAGCCAGAACATGAGAATCGCATCAGCCACGTCAGTACGTCCAGTGTGAAGACTGGTATCGCCAA  
 CACCCTGGGGAACAAGGGAGCCGTGGGTGTGCCTTCATGTTCAATGGCACCTCATTTGGCTTCGTGAAT  
 TGCCATCTCACCTCAGGGAATGAGAAGACTACTCGGCGGAACCAGAATTATCTGGACATTCTGCGTCTCC  
 TCTCGTTGGGTGATCGGCAGCTCAGTGCCTTTGACATCTCTTTGCGGTTCACTCATCTCTCTGGTTTG  
 GGACCTTAACACCGCTTAGACATGGATATCCAGGAGATCCTGAACACTACATTAGTAGGAGAGAGTTTGAG  
 CCTCTGCTCAGGGTGGACCAGCTCAACCTGGAGCGGGAGAAGCATAAGGTCTTCCATTAGTGAGG  
 AGGAGATATCTTTCCACCCACCTACCGCTACGAGCGGGTTCCCGGGACACATACGCTTGGCACAAGCA  
 GAAGCCAACCTGGGTCCGACCAATGTGCCTTCGTGGTGTGACCGGATTCTATGGAAATCCTATCCTGAA  
 ACCCACATCATCTGCAATTCTATGTTGCACTGATGACATTGTTACCAGTGACCATTCTCTGTGTTTG  
 GGACATTTGAGGTTGGAGTTACTTCCCAGTTTCATCTCCAAGAAAGGTCTCTAAGACCTCAGATCAAGC  
 CTACATTGAGTTTGGAGTATCGAAGCCATTGTGAAGACAGCCAGCCGACCAAGTTCTTATTGAGTTC  
 TATTCTACCTGCTTGAAGAGTATAAGAAGAGCTTCGAGAATGATGCTCAGAGCAGGACAAACATCAATT  
 TCCTCAAGGTGCAGTGGTCTCCCGCCAGCTACCCAGCTCAAGCCAATTCTGGTGCATTGAGTACCT  
 GCAGGATCAGCATCTCTGCTCACAGTCAAGTCCATGGATGGCTACGAATCATATGGGGAGTGTGTGGT  
 GCACTCAAGTCCATGATTGGCAGCACAGCCAGCTTCTGACCTTCTGTCCCACCGTGGAGAGGAGA  
 CAGGCAACATCCGTGGTCCATGAAGGTGCGGGTGCACAGAGCGCCTGGGCACCCGTGAGCGGCTCTA  
 TGAATGGATTAGCATTGATAAGGATGACACAGGAGCCAAAAGCAAGGTTCTTCAAGTGTCAAGAGGCAGC  
 CAGGAGCACAGATCTGGGAGCCGAAGCCAGCTTCCACAGAGACCTCCTGTCCACTGTCCAAGTTGTTTG  
 AAGAGCCTGAAAAGCCACCAGGACTGGCAGACCCCGGCCCCACCACGGGCAGTTTCTAGGGAGGAGCC  
 CTTGAACCAAGGCTGAAGTCAAGGGGACATCTGAGCAGGAAGGAGTAGCAGCCCCCACCACAAGAAC  
 AGCTTCAATAACCCTGCCTACTACGTCTTGAAGGGTCCCACATCAGCTGCTGCCCTGGAGCCACCCT  
 CACTTGCAGGGCCCTCTCCACCTGCCACCAAGAACAAGTGGCCATCACAGTGCCTGCTCCTCAGCT  
 TGGGCGCCACCGACCCCTCGTGTGGGGAGGGAAGCTCATCAGATGAGGACTCTGGGGCAGCAGTGCCT  
 CCTCCAGATTTCCACCTCCACCTGCCAGACTCAGCCATCTTCTGCCCCCTAACCTGGATCCTTTGT  
 CAATGCCAGTGGTCAGGGGCCAAGTGGGGTGGGCCCGTGGCCACCACCTCCCAAGGCCATCCAAG  
 ACCACCACTACCGCCAGGCACCTCACCTGCCAGTACTTTTTGGGAGAGGTGCAAGTGGGGATGACCGG  
 TCTTGTTCGTAAGTCAAAATGGCCAAAACACTCAGTGGAGTAGATTATGCTCCAGGGCCTGGAGCCTCAG  
 CACTCCTCCCAACCCCTTGAATTGCAGCCTCCCGAGGGCCCTCGGACTATGGCCGGCCCTCAGCTT  
 CCCTCCACCCGCATCCGGGAGAGCATCCAAGAAGACTTGGCAGAGGAGGCTCCGTGCCCGCAGGGCGGG  
 CGGGCCAGCGGGTGGGAGAGCGGGCATGGGTGCCTGGCTGCGGGCCATCGGCTTGAGGCCTATGAGG  
 AGGGCCTGGTGCACAATGGCTGGGACGACTGGAGTTTCTCAGTGACATCACTGAGGAAGACCTTGAGGA  
 AGCTGGGGTGCAGGATCCTGCTACAAGCGCCTTCTTCTGGACACCTTGCAGCTCAGCAAA**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

Sgfl-Mlul

**ACCN:**

NM\_010567

**Insert Size:**

3774 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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]

Transcript Variant: This variant (1) represents the longer transcript. Variants 1 and 2 encode the same protein.