

Product datasheet for **SC116980**

PI 3 Kinase p85 beta (PIK3R2) (NM_005027) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PI 3 Kinase p85 beta (PIK3R2) (NM_005027) Human Untagged Clone
Tag:	Tag Free
Symbol:	PI 3 Kinase p85 beta
Synonyms:	MPPH; MPPH1; p85; p85-BETA; P85B
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene ORF sequence for NM_005027 edited
ATGGCGGGCCCTGAGGGCTTCCAGTACCGCCTGTACCCGTTCCGCCGGGAGCGGCCG
GAGGACCTGGAGCTGCTGCCCGGCACGTGCTGGTAGTGAGCCGGGCGGCCTTGCAGGCG
CTGGGCGTGGCCGAGGGTGGCGAGCGCTGCCACAGAGCGTGGGCTGGATGCCCGGCCTC
AACGAGCGCACACGGCAGCGAGGTGACTTCCCTGGCACCTATGTGGAGTTCTGGGGCC
GTGGCCCTGGCCCGCCCGGCCCTCGCCACGGGGCCCCGCCACTGCCCGCCAGGCCCC
CGTGATGGGGCCCTGAGCCAGGCCTCACACTCCCCGACTTGCCCGAGCAGTTCTCCCA
CCTGATGTGGTCCCCCTTCTGGTGAAGCTTGTGGAGGCCATTGAAAGGACAGGGCTG
GACAGCGAATCTCACTACCGCCCGAGCTGCCCGACCGCGTACAGACTGGTCCCTGAGC
GACGTGGATCAGTGGGACACGGCAGCCCTGGCTGACGGCATTAAAGAGTTCTGTGGCA
CTGCCCGCGCCGCTCGTGACCCCGAGGCCTCGGCCGAGGCGCGCCGGCCCTGCGGGAG
GCCGCGGGGCCCGTGGGGCCGGCGCTGGAGCCACCGACGCTGCCGCTGCACCGCGCGCTC
ACGCTGCGCTTCTGTCTCAGCACCTGGGCCGCTGGCCCGCCGCGCCCGGCCCTGGGT
CCCGCGGTCCGGGCCCTGGGCGCACCTTTGGGCCGCTGCTGCTGCGCGCCCGCCCGCC
CCGTCTCGCCCGCCAGGGGGCGCTCCCGACGGGAGTGAGCCAGCCCTGACTTCCCG
GGCTGTGGTGGAGAAGCTGTTCAGGAACACTTGAAGAGCAGGAGGTTGCGCCCCCA
GCGCTGCCGCTAAACCCCCAAGGCAAAGCCGGCCCCACAGTCTGGCCAATGGAGGG
AGCCACCTCCCTGCAGGATGCTGAGTGGTACTGGGGGACATTTCAAGGGAGGAGGTG
AACGAGAACTCCGGGACACTCCCGATGGCACCTTCTAGTCCGAGATGCTTCTAGCAAG
ATCCAGGGCGAGTACACGCTGACCTCAGGAAAGGCGGGAACAATAAGCTGATCAAGGTC
TTCCACCGAGATGGGCACTATGGCTTCTCAGAGCCACTCACCTTCTGCTCCGTTGTGGAC
CTCATCAATCACTACCGCCACGAGTCTCTGGCCAGTACAATGCCAAGCTGGACACAGG
CTCCTTACCCTGTGTCAAATACCAGCAGGACCAGATTGTCAAGGAGGACAGCGTGGAG
GCAGTGGGCGCCAGCTTAAGGTCTATACCAGCAGTACCAGGACAAGAGCCGCGAGTAT
GACCAGCTTATGAAGAGTACACACGGACCTCCAGGAGCTGCAGATGAAGCGTACTGCA
ATTGAGGCCTTCAATGAGACTATCAAGATCTTTGAAGAGCAGGGCCAGACTCAAGAGAAA
TGCAGCAAGGAATACCTGGAGCGCTTCCGGCGTGAGGGCAACGAGAAAGAGATGCAAAGG
ATCCTGTGAACCTCCGAGCGGCTCAAGTCCCGCATTGCCGAGATCCATGAGAGCCGCACG
AAGCTGGAGCAGCAGCTGCGGGCCAGGCCTCGGACAACAGAGAGATCGACAAGCGCATG
AACAGCCTCAAGCCGGACCTCATGCAGCTGCGCAAGATCCGAGACCAGTACCTCGTGTGG
CTACCCAGAAAAGGCGCCCGGCAGAAGAAAATCAACGAGTGGCTGGGGATTAATAATGAG
ACTGAGGACCAGTACGCACTCATGGAGGACGAGGACGATCTCCCGCACCCAGGGAACGC
ACTTGGTACGTGGGAAGATCAACCGCACGCAGGCAGAGGAGATGCTGAGTGGCAAGCGG
GATGGCACCTTCTCATCCGCGAGAGCAGCCAGCGGGGCTGTACGCCTGCTCCGTGGTA
GTGGACGGCGACCAAGCACTGCGTCATCTACCGCACGGCCACCGGCTTCGGCTTCGCG
GAGCCCTACAACCTGTACGGGTGCTGAAGGAGCTGGTGTGCTACTACCAGCACGCCTCG
CTGGTGCAGCACAACGACGCGCTCACCGTACCCTGGCGACCCAGTGCAGCGCCCGGGC
CCCGCCCGCCGCTGCCGCCGCTGA
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_005027 unedited
 TAACCCCCGCCCCGTTGNCGCAAAGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAG
 CAGAGCTCATTTAGGTGACACTATAGAATAACAAGCTACTTGTCTTTTTGCAGCGGCCGC
 GAATTCGGACGAGGCAATGGCCAGTGACCTGACACCACACCACCAACTCCCTCCCACCA
 GCTGACGAATGGTGGACCCAGTGACGAGTGGCCCTTGTAAAGGTCATGGAATAATTTGAA
 GCGAGGCATGAGCGGCCCTGTGGTGCCTGTGACTGCTGGAGATAGAGGTCCCAGCACC
 CCAAGCCAACCCAGCGGACCCTCCAGCCCTGCTTCAACCAATGGGGCCAGTGGGGCTCC
 AAGCAGCCACCTAACCATCCAGACCCACCCCACTCACGCGGCCATGGCGGGCCCTGAGG
 GCTTCCAGTACCGCGCTCTGTACCCGTTCCGCCGGGAGCGGCCGGAGGACCTGGAGCTGC
 TGCCCGCGCAGCTGCTGGTAGTGAGCCGGGCGCCTTGACAGCGCTGGGCGTGGCCGAGG
 GTGGCGAGCGCTGCCACAGAGCGTGGGCTGGATGCCCGCCTCAACGAGCGCACACGGC
 AGCGAGGTGACTTNCCTGGCACCTATGTGGAGTTNCTGGGGCCCGTGGCCCTGGCCCGGC
 CCGCCCTCGCCACGNNGCCCCGCCACTGCCCGCAGGCCCGTGATGGGGCCCTGAG
 CCAGGCCACACTTCCCGACTTGCCCGACAGTTCTCCCACTGATGTGGTCCCCTTTC
 TGTGAAGCTGTTGAGGCCATGAAGGACAGGGCTGGACAGCGAATCTCACTACGCCCGGA
 CTGCCGACGCGTACGACTGGTCTGACGAGTGGATCGTGGGACACGCAGCCTGCCTGAC
 GCATTAGAGCTTCTGCTGCACTGCCGCGCGTCCGACCCCGAGCTCGCN

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_005027 unedited
 GAACTACTATGTACGTGGCCGCTTCTATGATCGGTTTTTTTTTTTTTTTTTTTGGAGTTT
 GATGTTTTATATCATATCAATAACAACGTACCGTACAAAACCTGCCTCCCAGCTCGTGGG
 GCAGGCAGTGTGGTGGCCAAGGGCAGCGTATAAAACCAGGGCTCTGTCCAAAAGAGGA
 GAGGAAAGAGGGTTTTGCAGTCAAGGAAAAACAGAATCAAAACCAACATGATCGAAGAG
 AAGCCCTGAATCTGCATCAGAGGGAGGGCCGTGGGCAGTGTCCGAACTGGCCACTGCG
 GCGCACCAAGTACGGGGAGCTGTGATTCCCTAAGAGGGGTTGGGGCCAGCTCACAAGTTTA
 TTTATTTATTTTTTTGAGACGGAGGAGTCTCCCTCTGTTACCCAAGCTGGGAGTGCANTG
 GCACGATCTCTGCTCACTGCAACCTCCATCTCCTGGGTTCAAGAGATTCTCACGCCTCAG
 CCTCCAAGTAGCTGGGATTACAGGCGGCCGCCACCACGCCCGGCTAATTTTTGTATTTT
 AGTAGATGCGGGGTTTTGCCATTTTGGCCAAATTGGCCTTCAACTCCCGACCTTCAAAGA
 TCCGCCCCGTCTTGGCCTCCCAAGTGTGGGATTACAGGCATGAACCACCGTGCCTGGCC
 TGCAGTTTTAATTTTTTTTTCGGGGTGGGGTGAACTTTTCTGCACCGGCCCTTTGGGGG
 GTAACCCGGTGGCGGTTTTACCTTGGGGTTTGGAGGGGAATTTGGGTTCTGTGGGGCGG
 GTCCCCCCGGCCCCATGGTACCGGCCGGGTTTTTTGGAACCACAAAATTGAATTTCC
 TTTCTGGCCCTGCCCCAGGTCTATGGGCTTAAAAATAAGGGGCCCCACA

Restriction Sites:

NotI-NotI

ACCN:

NM_005027

Insert Size:

3500 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_005027.2](#), [NP_005018.1](#)

RefSeq Size: 3953 bp

RefSeq ORF: 2187 bp

Locus ID: 5296

UniProt ID: [O00459](#)

Cytogenetics: 19p13.11

Domains: RhoGAP, SH2, SH3

Protein Families: Druggable Genome

Protein Pathways: Acute myeloid leukemia, Apoptosis, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Glioma, Insulin signaling pathway, Jak-STAT signaling pathway, Leukocyte transendothelial migration, Melanoma, mTOR signaling pathway, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Phosphatidylinositol signaling system, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, Small cell lung cancer, T cell receptor signaling pathway, Toll-like receptor signaling pathway, Type II diabetes mellitus, VEGF signaling pathway

Gene Summary:

Phosphatidylinositol 3-kinase (PI3K) is a lipid kinase that phosphorylates phosphatidylinositol and similar compounds, creating second messengers important in growth signaling pathways. PI3K functions as a heterodimer of a regulatory and a catalytic subunit. The protein encoded by this gene is a regulatory component of PI3K. Three transcript variants, one protein coding and the other two non-protein coding, have been found for this gene. [provided by RefSeq, Apr 2019]

Transcript Variant: This variant (1) represents the protein-coding variant.