

Product datasheet for **SC303232**

PIK3C2B (NM_002646) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: PIK3C2B (NM_002646) Human Untagged Clone
Tag: Tag Free
Symbol: PIK3C2B
Synonyms: C2-PI3K
Mammalian Cell Selection: None
Vector: [pCMV6-XL5](#)
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_002646 edited
 CCCTCCAGAACTGACGTTGGCAGGAAGTAGAGACTTTGTTGCCTGTGTCCCCATCCTCA
 CCATGTCTTCGACTCAGGGCAATGGGGAACACTGGAAGTCCCTGGAGTCAGTGGGCATCA
 GCCGCAAAGAGCTAGCGATGGCCGAAGCCCTGCAGATGGAGTATGATGCCCTGTCCCGGC
 TCCGGCATGACAAGGAGGAGAACAGAGCCAAGCAGAACGCAGACCCTCTCTCATCAGCT
 GGGATGAGCCTGGGGTAGACTTTTACAGCAAGCCAGCAGGAAGGCGGACCGACCTCAAGC
 TGTTACGCGGTCTCTCTGGCTCTGATCCTACCCTTAACTACAACACTCACTCTCCCCACAGG
 AAGGGCCGCCAACCCTCTACCTCCCAAGGGCCACAGCCTGGCTCAGATCCCTGGCCCA
 AAGGCTCCCTGTCTGGAGACTATCTCTACATTTTTGATGGTTCAGATGGGGGAGTCTCTT
 CGTCCCCAGGACCAGGGACATAGAGGGCTCTTGAAGAACTATCCCCACCTCCTCTGC
 CTCCCCGAGCTTCTATCTGGGATACCCCTCCCTGCCCTCCAGAAAGGGGTCCCCCTCAT
 CCTCCAAGATCTCCAGCCAGTGACATCAACTTTCTTTGGTTCGAACAATTGCCGG
 GCAAACCTGCTAGAGCATCGGATCCTAGAAGAGGAAGAGGTGCTGGGAGGTGGGGTCAAG
 GGCGCCTACTGGGTCTGTGGACTATGATGGTATCAATGATGCAATTAAGGCTCAACT
 TGAAATCGACCTATGATGCGGAGATGTTGCGGGATGCCACCAGGGGCTGGAAGGAGGGCC
 GAGGGCCGCTGGACTTCAGCAAAGACACCTCTGGAAAACCCGTGGCCAGGAGCAAGACTA
 TGCCCCCTCAGGTGCCCCCGCACCTATGCCTCCCGCTATGGCAACCGAAAGAATGCGA
 CGCCTGACAAGAACCGCCGATTTCTGCAGCCCCGGTGGGCTCCCGGCCCCACACTGTTG
 CCAATGGCCATGAGTTGTTTGGGTCTCAGAAGAGAGAGATGAGGAGGTTGCTGCATTTT
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 ATGCTGAGGTGCTGTACCCCTAGCCCAGAGCACCTCGGGGATGAGGTCAACCTGAAGG
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 CTGTAGACTTGCTTATCTACCAGACCCTGTGCTACCCCATGATGACCTGAGGAATGTGG
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 CCTTGGGCAGTCATGAGTACATCCAATACTGCCGCAAGTTTACATTGACATTGCGCTAC
 AGCTGATGGAGCAGAAGTTGTGCGCAGTGACCTGGCCCGGACGGTGAATGATGACCAGA
 GCCCTCCACCTTGAACCTCGTCCATCTCCAAGAGAGGCCTGTCAAGCAGACCATCA



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GCAGGCAGGCCCTGAGTCTTCTGTTTCGACACTTACCACAATGAGGTGGATGCCTTCTGCTG
TGGCTGATGGAGACTTCCCCTGAAAGGCTGACAGGGTGGTCCAGTCCGTCAAGGCCATCT
GCAACGCCCTGGCCGCGTGGAAACCCCTGAGATCACCAGTGTCTCAACCAGCTGCCCC
CCTGCCCTCCCAGTGCAGCCTAAAATTCAGAAGGATCCCAGTGTCTTGGCTGTGAGGG
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TCTTCACTTCCAGCAGTCTGACCTGTGGCCGAAGCTTCTGGGTTTGTGGCCAGCAA
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TCCTGCAGATTGACTTCCCACCTCGGCCTTTGACATCAAGTTCCACCAGCCCCCTGGAG
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ACATGAACCACCAGGATGCCCTGGGGCTCCTGCATGCCACCTCCCGGACCAGGAGGTGC
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CCCAGCTGGTACAGGCCCTGAAGTATGAATGCTACCTGGACAGCCGTTGGTGGCCTTCC
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ACATCATGCTGAAGACCACTGGTCACATGTTCCACATTGATTTTGGCCGCTTCTGGGCC
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TCCCTTCTCCACTTGGCCAGCTTCCCTAGTCGCTTCTGATCGCCGCTCCCGGGGAG
AGGCGGTGGCCGAGCGGGAGGAGGAGCTAAACGGTTACATCTGGCACTTGTATCCACG
CACCCCTGAGGTGGCCGAGTGTGATTTGGTGTACACCTTCTTCCACCCACTGCCCGGG
ATGAGAAGGCTATGGCACCCAGCCAGCTCCTAAGTCTCAGATGGCACATGGGCCCCGGC
CCGTGGAAAGGTGGGAGGGGAGGTGAAGCTGTCCATCTCCTACAAAAACAATAAATCT
TCATCATGGTGTGCATATTCGGGGCTTGAACCTGCTCCAGGATGGAATGACCTGACC

CCTATGTGAAAATTTACCTCCTTCTGACCCTCAGAAAACCACTAAGAGGAAAACCAAAG
 TGGCCCGAAAACCTGCAATCCTACCTACAATGAGATGTTGGTATATGATGGGATCCCA
 AGGGTGACCTGCAGCAGCGGGAGCTCCAGCTGAGCGTGTGAGTGAGCAGGGATTCTGGG
 AGAACGTCTCTCGGTGAGGTGAACATCCGCCTGCGAGAGCTGGACCTGGCTCAGGAGA
 AGACCGGCTGGTTCGCCCTGGGATCTCGAAGTCATGGCACCTTGTGAG

**5' Read Nucleotide
 Sequence:**

>OriGene 5' read for NM_002646 unedited
 NGGGGGTCAAATTTGATACGACTCATATAGGGCGGCCGGAATCGCCCTTCCCTCCAAA
 ACTGACGTTGGCAGGAAGTAGAGACTTTGTTGCCTGTGTCCCCATCCTCACCATGTCTT
 CGACTCAGGGCAATGGGGAACACTGGAAGTCCCTGGAGTCAGTGGGCATCAGCCGCAAAG
 AGCTAGCGATGGCCGAAGCCCTGCAGATGGAGTATGATGCCCTGTCCCGCTCCGGCATG
 ACAAGGAGGAGAACAGAGCCAAGCAGAACGCAGACCCCTCTCATCAGCTGGGATGAGC
 CTGGGGTAGACTTTTACAGCAAGCCAGCAGGAAGGCGGACCGACCTCAAGCTGTTACGGC
 GTCTCTCTGGCTGTGATCCTACCCTTAACACTCACTCTCCACAGGAAGGGCCG
 CCAACCCTCTACCTCCCAAGGGCCACAGCCTGGCTCAGATCCCTGGCCAAAGGCTCCC
 TGCTGGAGACTATCTACATTTTGTGTTTATGAGTGGGAGTCTCTCGTCCCGAG
 GACCAGGGGACATAGAGGGCTCTTGCAAGAACTATCCACCTCCTCTGCCTCCCGAG
 CTTCTATCTGGGATACCCCTCCCTGCCTCCAGAAAGGGTCCCTCATCCTCCAAGA
 TCTCCAGCCAGTGACATCAACTTTCTTTGGTGAACAATTGCCGGGCAAAGTGC
 TAGAGCATCGGATCCTANAAGAGGAAGAGGTGCTGGGAGTGGGGTCAGGGGCGCTAC
 TGGGGTCTGTGGACTATGATGGTATCAATGATGCAATTACTANGCTCAACTTGAATCGA
 CCTATGATGCGGAGATGTTGCGGATGCCACCAGGGCTGG

**3' Read Nucleotide
 Sequence:**

>OriGene 3' read for NM_002646 unedited
 NCATTGGGATGGCACTTCAGGCCAGGAGCACTGGGGAGGGTCACAGGGTGCCACCCGG
 GATCTGTTTCAAAAACAGCTATGACCGCGGCCGAATCTAGACTCACAAGGTGCCATGACT
 TCGAGATCCAGGGCGAACCAGCCGGTCTTCTCCTGAGCCAGGTCCAGCTCTCGAGGCG
 GATGTTCACTCACCGAGGAGGACGTTCTCCAGAATCCCTGCTCACTCAGCACGCTCAG
 CTGGAGCTCCCGCTGCTGCAGGTCACCCTTGGGGATCCCATCATATACCAACATCTCATT
 GTAGGTAGGATTGCAGGTTTTCCGGCCACTTTGGTTTTCTCTTCTAGTGGTTTTCTGAGG
 GTCAGGAAGGAGGTAAATTTTACATAGGGGTCAGGGTCATTTCCATCCTGGAGCAGTTG
 CAAGCCCCGAATATGCATCACCATGATGAAGAGTTTATTGTTTTGTAGGAGATGGACAG
 CTTACCTCCCTCCACCTTTCCGACGGGCCGGGCCATGTGCCATCTGAGGACTTAGG
 AGCTGGGCTGGTCCCATAGCCTTCTATCCCGGGGCAGTGGGTGGAAGAAGGTGTACAC
 CANATCACAACCTCGCCACCTCAGGGGGTGCCTGGATCAAGTGCCAGATGTAACCGTTT
 AAGGAAGCTGGCCAGTGGGAAGAAGGGAGAGCAGCCGCCACCTTATTGTGTAATCCTG
 GAACTTCTCAAAGGTCCGCTGGAAGTAAGTGGCCCTCTGAGTGTCTCTCCGAAAACCT
 TACCACATATTTAGCCTTTGTGGGGTGAAGATCTTCTCAGGGGCGCAGAGAAAACCT
 CG

Restriction Sites:

Please inquire

ACCN:

NM_002646

Insert Size:

5000 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](#)

OTI Annotation: The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.

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_002646.2](#), [NP_002637.2](#)

RefSeq Size: 7618 bp

RefSeq ORF: 4905 bp

Locus ID: 5287

UniProt ID: [O00750](#)

Cytogenetics: 1q32.1

Protein Families: Druggable Genome

Protein Pathways: Inositol phosphate metabolism, Metabolic pathways, Phosphatidylinositol signaling system

Gene Summary:

The protein encoded by this gene belongs to the phosphoinositide 3-kinase (PI3K) family. PI3-kinases play roles in signaling pathways involved in cell proliferation, oncogenic transformation, cell survival, cell migration, and intracellular protein trafficking. This protein contains a lipid kinase catalytic domain as well as a C-terminal C2 domain, a characteristic of class II PI3-kinases. C2 domains act as calcium-dependent phospholipid binding motifs that mediate translocation of proteins to membranes, and may also mediate protein-protein interactions. The PI3-kinase activity of this protein is sensitive to low nanomolar levels of the inhibitor wortmanin. The C2 domain of this protein was shown to bind phospholipids but not Ca^{2+} , which suggests that this enzyme may function in a calcium-independent manner. [provided by RefSeq, Jul 2008]