

Product datasheet for **RC205317**

PI 3 Kinase Class 3 (PIK3C3) (NM_002647) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PI 3 Kinase Class 3 (PIK3C3) (NM_002647) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PIK3C3
Synonyms:	hVps34; VPS34; Vps34
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC205317 representing NM_002647
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGGGAAGCAGAGAAGTTTCACTACATCTATAGTTGTGACCTGGATATCAACGTCAGCTTAAGATAG
 GAAGCTTGAAGGAAGAGAGAACAAAAGAGTTATAAAGCTGTCCTGGAAGACCCAAATGTTGAAGTTCTC
 AGGACTATATCAAGAGACATGCTCTGATCTTTATGTTACTTGTCAAGTTTTTGCAGAAGGAAGCCTTTG
 GCCTTGCCAGTGAGAACATCCTACAAGCATTTAGTACAAGATGGAAGTGAATGAATGGCTGAACTAC
 CAGTAAAAATACCCTGACCTGCCAGGAATGCCAAGTGGCCCTCACCATATGGGATGTGTATGGTCCCGG
 AAAAGCAGTGCCTGTAGGAGGAACAACGGTTTCGCTCTTTGGAAAATACGGCATGTTTCGCCAAGGGATG
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 CCCCAGATGTCTATGGAGAATTTAGTTGAGAGCAACACCACAAGCTTGCCCGGAGTTTAAAGAGTGG
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 CAACCAAGCAACTTACATATGAAGAACAAGATCTTGTGGAAAGTTTAGATATTCTTACGAATCAAGA
 AAAAGCCTTGACAAAATCTTGAAATGTGTTAATTGGGATCTACCTCAAGAGGCCAAACAGGCCTTGAA
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 ACAATTGGTCCAGGCTCTCAAATATGAAAATTTGATGATATAAAGAATGGATTGGAACCTACCAAGAAG
 GATAGTCAGAGTTCAGTGTGAGAAAATGTGTCAAATTCGGAATAAATTCGAGAAAATAGATAGCTCCC
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 TATGCGTTCTTTGCTGGCTGCACAACAGACATTTGTAGATCGGTTGGTGCATCTAATGAAGCGAGTACAA
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 AGTACCAAGAGTTCGTAACAGTGTACACGGCTTCTCCACCTGCGAAGGTATTCTAATCTGATTTT
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 AAGGTTACAGATAAATCCGCTTAGACCTGTCGGATGAAGAGGCTGTGCATTACATGCAGAGTCTGATTG
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 A

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC205317 representing NM_002647
 Red=Cloning site Green=Tags(s)

MGEAEKFHYIYSCDLINVLKIGSLEQKREQKSYKAVLEDPMLKFSGLYQETCSLDLVYTCQVFAEGKPL
 ALPVRTSYKAFSTRWNNEWLKLVPKYKPDLPNAQVALTIWDVYGPVKAVPVGGTTVSLFGKYGMFRQGM
 HDLKVWPNVEADGSEPTKTPGRTSSTLSEDMQSRSLAKLTKAHRQGHMVKVDWLDRLTFREIEMINESEKR
 SSNFMYLMVEFRCVKCDDKEYGIVYVEKDGDESSPILTSFELVKVPDPQMSMENLVEKHHKLARSLRSG
 PSDHDLKPNAATRDQLNIIVSYPPTKQLTYEEQDLVWKFYYLTNQEKALTKFLKCVNWDLPQEAQALE
 LLGKWKPMDEVDSLELLSSHYNPTVRRYAVARLRQADDEDLLMYLLQLVQALKYENFDDIKNGLEPTKK
 DSQSSVSENVNSGINSAEIDSSQIITSPLPSVSSPPPASKTKEVPDGENLEQDLCTFLISRACKNSTLA
 NYLYWYVIVECEDQDTQQRDPKTHEMYLNMVRRFSQALLKGDKSVRVMRSLAAQQTfVDRLVHLMKAVQ
 RESGNRKKKNERLQALLGDNEKMNLSDVELIPLPEQVKIRGIIPETATLFSALMPAQLFFKTEDGGK
 YPVIFKHGDDLQDQLILQIISLMDKLLRKENLDLKLTPYKVLATSTKHGFMQFIQSVPAEVLDTEGSI
 QNFFRKYAPSENGPNGISAEVMDTYVKSCAGYCVITYILGVGDRHLDNLLLTKTGKLFHIDFGYILGRDP
 KPLPPPMKLNKEMVEGMMGTQSEYQEFRKQCYTAFHLHRRYSNLILNLFSLMVDANIPDIALEPDKTVK
 KVQDKFRLDLSDEEAVHYMQSLIDESVHALFAAVVEQIHKFAQYWRK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2495_d01.zip

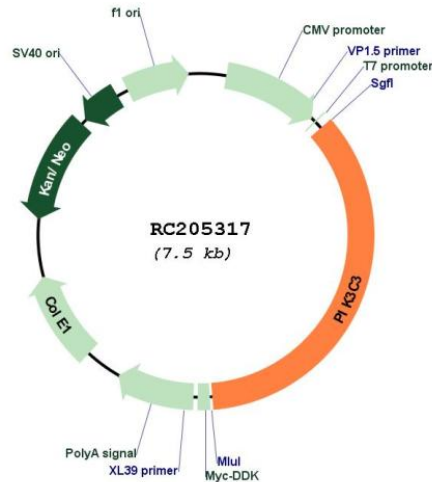
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_002647

ORF Size: 2661 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_002647.4](#)

RefSeq Size: 3083 bp

RefSeq ORF: 2664 bp

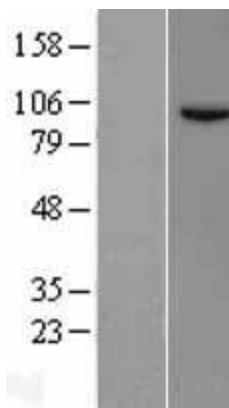
Locus ID: 5289

UniProt ID: [Q8NEB9](#)

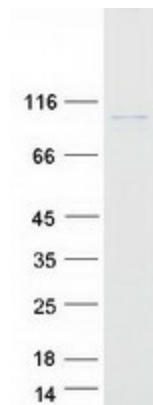
Cytogenetics: 18q12.3

Domains:	PI3_PI4_kinase, PI3Ka, PI3K_C2
Protein Families:	Druggable Genome
Protein Pathways:	Inositol phosphate metabolism, Metabolic pathways, Phosphatidylinositol signaling system, Regulation of autophagy
MW:	101.4 kDa
Gene Summary:	Catalytic subunit of the PI3K complex that mediates formation of phosphatidylinositol 3-phosphate; different complex forms are believed to play a role in multiple membrane trafficking pathways: PI3KC3-C1 is involved in initiation of autophagosomes and PI3KC3-C2 in maturation of autophagosomes and endocytosis. Involved in regulation of degradative endocytic trafficking and required for the abscission step in cytokinesis, probably in the context of PI3KC3-C2 (PubMed:20643123, PubMed:20208530). Involved in the transport of lysosomal enzyme precursors to lysosomes. Required for transport from early to late endosomes (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Western blot validation of overexpression lysate (Cat# [LY400941]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205317 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PIK3C3 protein (Cat# [TP305317]). The protein was produced from HEK293T cells transfected with PIK3C3 cDNA clone (Cat# RC205317) using MegaTran 2.0 (Cat# [TT210002]).