

## Product datasheet for RC222192

### PI 3 Kinase Class 2A (PIK3C2A) (NM\_002645) Human Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | PI 3 Kinase Class 2A (PIK3C2A) (NM_002645) Human Tagged ORF Clone           |
| Tag:                      | Myc-DDK   |
| Symbol:                   | PI 3 Kinase Class 2A  |
| Synonyms:                 | CPK; OCSKD; PI3-K-C2(ALPHA); PI3-K-C2A; PI3K-C2-alpha; PI3K-C2alpha         |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >RC222192 representing NM_002645<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTCAGATATCTAGCAACAGCGGATTTAAAGAATGTCCATCTTCACATCCGGAACCAACAAGAGCAA  
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GAGCATATTCAAACCTGTGCGAAAATGGGACACAGAAAATTAGACTACAACCTTTGACCTTCAGTGCAATGT  
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CTTGGGTGGAGTAACCTGCCTTTGAAAGATTTCAACTTGAGCAAAGAGACGGTTAAATGGTATCAGCTG  
ACTGCGGCAACATACTTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC222192 representing NM\_002645  
Red=Cloning site Green=Tags(s)

MAQISSNSGFKECPSSHPEPTRAKDVKKEEALQMEAEALAKLQKDRQVTDNQRGFELSSSTRKKAQVYNK  
QDYDLMVFPESDSQKRALDIDVEKLTQAELEKLLDDSFETKKTVPVLPVTPILSPSFAQLYFRPTIQRG  
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SSGSSPDSNKQRKGPEALGKVSPLPFDKRF LTCGTLLYLWTSSTNSVPGTVTKKGYMERIVLQVDF  
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ALKYEIYLNSSLVQFLLSRALGNIQIAHNL YWLLKDALHDVQFSTRYEHVLGALLSVGGKRLREELLKQT  
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LNLLSLMIPSGLPELTSIQDLKYVRDALQPQTDAEATIFFTRLIESSLGSIATKFNFFIHNLAQLRFSG  
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NKL SIIIFPLWKLPGFNRMLVLRTHIKDVAARKIELNSYLQSLMNASTDVAECDLVCTFFHPLL RDEKA  
EGIARSADAGSFSPTPGQIGGAVKLSISYRNGTLFIMVMHIKDLVTEGDADPNPYKTYLLPDNHKTSKR  
KTKISRKTRNPTFNEMLVYSGYSKETLRQRELQLSVLSAESLRENFFLGGVTLPLKDFNL SKETVKWYQL  
TAATYL

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_002645

**ORF Size:** 5058 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\\_002645.4](#)

**RefSeq Size:** 5061 bp

**RefSeq ORF:** 5061 bp

**Locus ID:** 5286

**UniProt ID:** [O00443](#)

**Cytogenetics:** 11p15.1

**Domains:** C2, PI3K\_rbd, PI3\_PI4\_kinase, PI3Ka, PX, PI3K\_C2

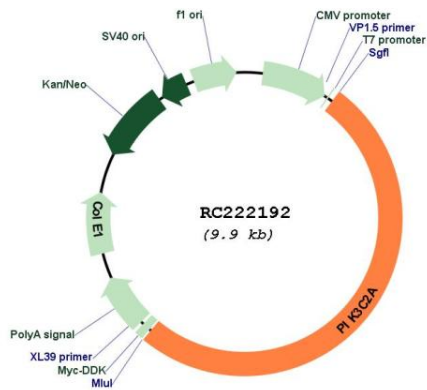
**Protein Families:** Druggable Genome

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

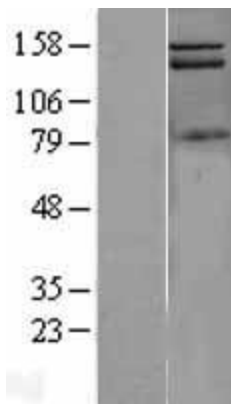
**MW:** 190.5 kDa

**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 not sensitive to nanomolar levels of the inhibitor wortmanin. This protein was shown to be able to be activated by insulin and may be involved in integrin-dependent signaling. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC222192



Western blot validation of overexpression lysate (Cat# [LY400940]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222192 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).