

# **Product datasheet for RC400373**

#### OriGene Technologies, Inc.

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## PI 3 Kinase catalytic subunit alpha (PIK3CA) (NM 006218) Human Mutant ORF Clone

### **Product data:**

**Product Type:** Mutant ORF Clones

Product Name: PI 3 Kinase catalytic subunit alpha (PIK3CA) (NM\_006218) Human Mutant ORF Clone

Mutation Description: Q546R Affected Codon#: 546

Affected NT#: c.1637

Nucleotide Mutation: PIK3CA Mutant (Q546R), Myc-DDK-tagged ORF clone of Homo sapiens phosphoinositide-3-

kinase, catalytic, alpha polypeptide (PIK3CA) as transfection-ready DNA

**Effect:** Missense

Symbol: PI 3 Kinase catalytic subunit alpha

Synonyms: CLAPO; CLOVE; CWS5; MCAP; MCM; MCMTC; p110-alpha; PI3K; PI3K-alpha

E. coli Selection: Kanamycin (25 ug/mL)

Mammalian Cell Neomycin

Selection:

**Vector:** pCMV6-Entry (PS100001)

 Tag:
 Myc-DDK

 ACCN:
 NM\_006218

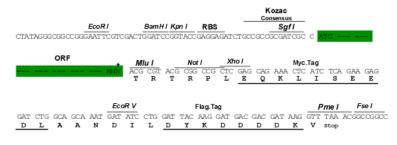
ORF Size: 3204 bp
Restriction Sites: Sgfl-Mlul
Restriction Sites: Sgfl-Mlul





#### **Cloning Scheme:**





<sup>\*</sup> The last codon before the Stop codon of the ORF

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 <a href="mailto:customer.com">customer.com</a> 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. <u>More info</u>

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).

RefSeq: NP 006209



 RefSeq Size:
 3724 bp

 RefSeq ORF:
 3207 bp

 Locus ID:
 5290

 Cytogenetics:
 3q26.32

**Domains:** PI3K\_rbd, PI3\_PI4\_kinase, PI3Ka, PI3K\_C2, PI3K\_p85B

**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, Inositol phosphate metabolism, 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

MW: 124 kDa

**Gene Summary:** Phosphatidylinositol 3-kinase is composed of an 85 kDa regulatory subunit and a 110 kDa

catalytic subunit. The protein encoded by this gene represents the catalytic subunit, which uses ATP to phosphorylate PtdIns, PtdIns4P and PtdIns(4,5)P2. This gene has been found to be oncogenic and has been implicated in cervical cancers. A pseudogene of this gene has

been defined on chromosome 22. [provided by RefSeq, Apr 2016]