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Product datasheet for RC400348

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:	E545K
Affected Codon#:	545
Affected NT#:	c.1633
Nucleotide Mutation:	PIK3CA Mutant (E545K), 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 Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_006218
ORF Size:	3204 bp
Restriction Sites:	SgfI-MluI

ORF Nucleotide Sequence:

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>RC400348 representing NM_006218
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
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TGGTTTTGCTATCGGCATGCCAGTGTGTGAATTTGATATGGTTAAAGATCCAGAAGTACAGGACTTCCGA
AGAAATATTCTGAACGTTTGTAAAGAAGCTGTGGATCTTAGGGACCTCAATTCACCTCATAGTAGAGCAA
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Protein Sequence:

>RC400348 representing NM_006218
Red=Cloning site Green=Tags(s)

MPPRPSSGELWGIHLMPPRILVECLLPNGMIVTLECLREATLITIKHELFKEARKYPLHQLLQDESSYIF
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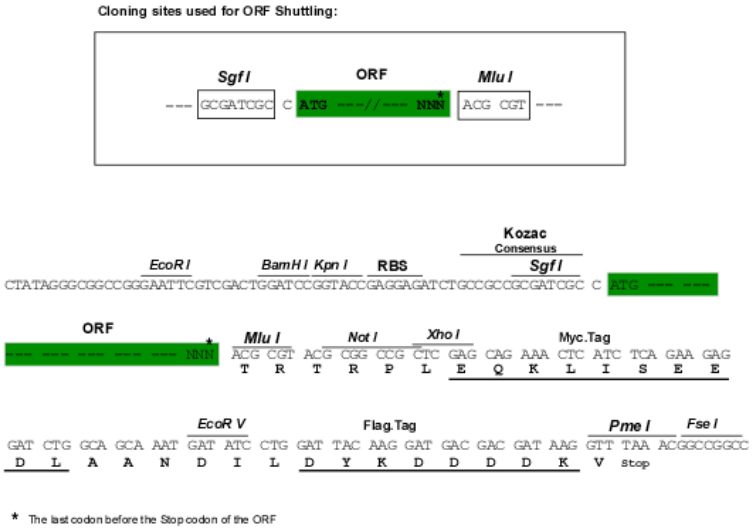
Chromatograms: /chromatograms/ja1770_f03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



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

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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).
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
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]

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