

Product datasheet for **RC210544**

PI 3 Kinase p85 alpha (PIK3R1) (NM_181523) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PI 3 Kinase p85 alpha (PIK3R1) (NM_181523) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PI 3 Kinase p85 alpha
Synonyms:	AGM7; GRB1; IMD36; p85; p85-ALPHA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC210544 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGAGTGTCTGAGGGTACCAGTACAGAGCGCTGTATGATTATAAAAAGGAAAGAGAAGAAGATTTGACT
 TGCACTTGGGTGACATATTGACTGTGAATAAAGGGTCTTAGTAGCTCTGGATTCAGTGATGGACAGGA
 AGCCAGGCCTGAAGAAATTGGCTGGTTAAATGGCTATAATGAAACCACAGGGGAAAGGGGGACTTTCCG
 GGAACCTACGTAGAATATATTGGAAGGAAAAAAATCTCGCCTCCACACCAAAGCCCGCCACCTCGGC
 CTCTTCTGTTGCACCAGGTTCTTCGAAAAGTGAAGCAGATGTTGAACAACAAGCTTTGACTCTCCCGGA
 TCTTGCAGAGCAGTTTGCCTCCTGACATTGCCCGCCTCTTCTATCAAGCTCGTGGAAAGCCATTGAA
 AAGAAAGTCTGGAATGTTCAACTCTATACAGAACACAGAGCTCCAGCAACCTGGCAGAATTACGACAGC
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 ACGCTATCTCCTGGACTTACCAATCCTGTCTCCAGCAGCCGTTTACAGTGAAATGATTTCTTTAGCT
 CCAGAAGTACAAAGCTCCGAAGAATATATTCAGCTATTGAAGAAGCTTATTAGGTCGCCTAGCATACCTC
 ATCAGTATTGGCTTACGCTTTCAGTATTTGTTAAAAATTTCTTCAAGCTCTCTCAAACCTCCAGCAAAAA
 TCTGTTGAATGCAAGAGTACTCTCTGAAATTTTCAGCCCTATGCTTTTCAGATTCTCAGCAGCCAGCTCT
 GATAATACTGAAAACCTCATAAAAGTTATAGAAATTTTAACTCAACTGAATGGAATGAACGACAGCCCTG
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 AAGGGGGAATAACAAATTAATCAAATATTTTCATCGAGATGGGAAATATGGCTTCTGACCCATTAAC
 CTTTCAGTTCTGTGGTTGAATTAATAAACCACTACCGGAATGAATCTCTAGCTCAGTATAATCCCAAATTG
 GATGTGAAATTACTTTATCCAGTATCCAAATACCAACAGGATCAAGTTGTCAAAGAAGATAATTTGAAG
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 AATTATTGACAGTAGAAGAAGATTGGAAGAAGACTTGAAGAAGCAGGCAGCTGAGTATCGAGAAATTGAC
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 CGAAACAAAGCTGAAAACCTGTTGCGAGGGAAGCGAGATGGCACTTTTCTTGCCGGGAGAGCAGTAAAC
 AGGGCTGCTATGCCTGCTCTGTAGTGGTGGACGGCGAAGTAAAGCATTGTGTCATAAAACAAACAGCAAC
 TGGCTATGGCTTTGCCGAGCCCTATAACTTGTACAGCTCTCTGAAAGAAGTGGTGTACATTACCAACAC
 ACCTCCCTTGTGCAGCACAACGACTCCCTCAATGTCACACTAGCCTACCCAGTATATGCACAGCAGAGGC
 GA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC210544 protein sequence
 Red=Cloning site Green=Tags(s)

MSAEGYQYRALYDYKKEREEDIDLHLGDILTVNKGSLVALGFSDGQEARPEEIGWLNQYNETTGERGDFP
 GTYVEYIGRKKISPTPKPRPRPLPVAPGSSKTEADVEQQAL TLPDLAEQFAPPDIAPLLIKLVEAIE
 KKGLEECSTLYRTQSSSNLAELRQLLDLCDTPSVLDLEMDVHVLADAFKRYLLDLPNPVIPAAYSEMISLA
 PEVQSSEEYIQLLKKLIRSPSIPHQYWL TLQYLLKHFFKL SQTSSKNLLNARVLEIFSPMLFRFSAASS
 DNTENLIKVIEILISTEWNERQPAPALPPKPPKPTTVANNGMNNMSLQDAEWYWGDISREEVNEKLRDT
 ADGTFLLVRDASTKMHGDYTLTLRKGGNNKLIKIFHRDGKYGFSDPLTFSSVVELINHYRNESLAQYNPKL
 DVKLLYPVSKYQQDQVVKEDNIEAVGKKLHEYNTQFQEKSRDYRLYEEYTRTSQEI QMKRTAIEAFNET
 IKIFEEQCQTQERYSKEYIEKFKREGNEKEIQRIMHNYDKLSRISEIIDSRRRLEEDLKKQAAEYREID
 KRMNSIKPDLIQLRKTRDQYLMWL TQKGVQRKLLNEWLGNENTEDQYSLVEDDEDLPHHDEKTWNVGSSN
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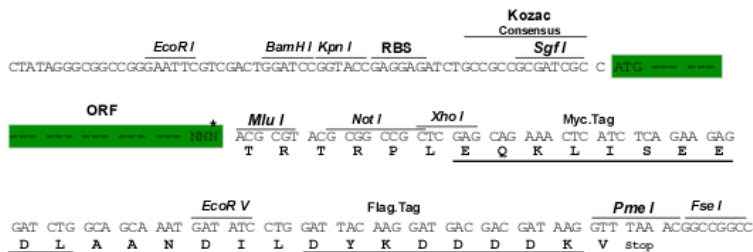
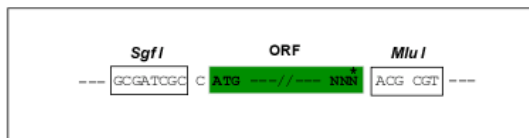
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6140_a08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_181523

ORF Size: 2172 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: 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_181523.3](#)

RefSeq Size: 6991 bp

RefSeq ORF: 2175 bp

Locus ID: 5295

UniProt ID: [P27986](#)

Cytogenetics: 5q13.1

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, 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

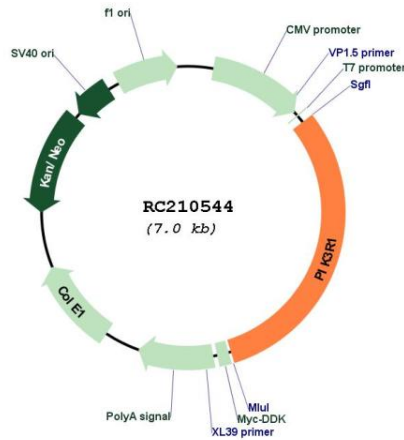
MW:

83.6 kDa

Gene Summary:

Phosphatidylinositol 3-kinase phosphorylates the inositol ring of phosphatidylinositol at the 3-prime position. The enzyme comprises a 110 kD catalytic subunit and a regulatory subunit of either 85, 55, or 50 kD. This gene encodes the 85 kD regulatory subunit. Phosphatidylinositol 3-kinase plays an important role in the metabolic actions of insulin, and a mutation in this gene has been associated with insulin resistance. Alternative splicing of this gene results in four transcript variants encoding different isoforms. [provided by RefSeq, Jun 2011]

Product images:



Circular map for RC210544