

Product datasheet for MR223909

Pik3cb (NM_029094) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pik3cb (NM_029094) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pik3cb
Synonyms:	1110001J02Rik; A1447572; p110beta
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR223909 representing NM_029094 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCCTCTGCTATGGCAGACAACCTTGACATCTGGGCAGTGGACTCACAGATTGCATCCGATGGCGCCA
TATCCGTCGATTTCTTCTGCCACCGGATTTATATCCAGTTGGAAGTACCTCGGAAGCTACCATTTCT
TTATATTAACAGATGTTATGGAAGCAAGTTCACAACCTACCCGATGTTAACTCCTCATGGACATTGAC
TCGTATATGTTTGCATGTGTGAATCAAAGTCTGTATATGAGGAAGTGGAAAGACGAAACACGAAGACTTT
GTGATGTCAGACCTTTTCTCCAGTTCTCAAAGTACTGACTAGAAGCTGTGACCCCGCAGAAAAATTGGA
CTCAAAAATTGGGTTCTTATAGGAAAAGTCTTCATGAGTTTGTGATGCCTTGAAGGATCCCGAAGTGAAT
GAATTTAGAAGAAAAATGCGCAAATTCAGTGAGGCCAAGATTCAGTCTCTGGTAGGGTTGTCTTGGATCG
ACTGGCTAAAGCACACGTATCCGCCTGAGCAGCAGCCGTCCTGCTGGAGAACTTGAAGATAAACTTTA
TGGAGGAAAGCTGGTGTGGCTGTGCACTTTGAAAATAGCCAGGATGATTTAGTTTTCAAGTGTCTCCC
AATTTGAATCCTATAAAAATAAATGAATTGGCAATCCAGAAACGCCTCACTATTCGTGGAAAGGAAGATG
AAGCTAGCCCCTGTGACTATGTGTTACAGGTCAAGTGGGAGAGTGGAGTATGTGTTGGCGATCATCCACT
AATTCAGTCCAGTACATCCGGAATTGTGTGATGAATAGAACCCTGCCCACTTCATCCTGTGGAATGT
TGTAAGATCAAGAAAATGTATGAACAAGAAATGATTGCCATAGAGGCTGCCATCAACCGAACTCATCCA
ACCTTCTCTCCCTTACCACCAAAGAAAACGCGAGTTATTTCTCATATCTGGGACAACAACAACCTTT
CCAAATTACCTTGGTTAAAGGAAATAAGCTTAATACAGAAGAACTGTGAAAAGTTCATGTCCGAGCTGGG
CTTTTTACGGAACCGAGCTCCTGTGTAACCCTCGTAAGCTCAGAGATATCAGGAAAGAACGACCATA
TTTGAATGAACAACTGGAATTTGATATTAATATTTGTGACTTACCAAGAATGGCTCGATTATGTTTGC
TGTTTATGCAGTTTTGGATAAAGTAAAAACGAAGAAATCAACAAAGACTATTAATCCCTCTAAGTATCAG
ACCATCAGGAAAGCCGGGAAAGTGCATTATCCTGTGCGATGGGTAATACCATGGTTTTTACTTCAAAG
GACAGCTGAGGTCTGGAGACGTCAATTGCATAGCTGGTCTTCGTTTCTGATGAGCTGGAAGAAATGCT
GAATCCATGGGACTGTGCAGACGAACCCATATGCTGAGAACGCCACCGCTTGCATTACGTTCCCA



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GAGAATAAGAAGCAGCCGTGTTATTATCCCCCTTCGATAAGATCATTGAGAAGGCAGCTGAGCTTGCCA
 GCGGAGACAGTGCTAATGTGTCAAGTCGTGGTGGAAAAAATTTCTTGCTGTGCTGAAAGAAATCTTGGA
 CAGGGACCCCCTGTCTCAGCTGTGTGAGAACGAAATGGACCTATTTGGACTCTACGGCAAGACTGCCGA
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 GCGCTCTCTGACCTGCAGTCGCCGCTGAACCCCTGCGTCATCCTCTCAGAGCTCTATGTTGAAAAGTGC
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 CCTGGACCGAGCGATTGAGGAGTTACCTGTCTGTGCTGGCTACTGTGTAGCCTCTTATGTCCTCGGC
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 GAAGATGCGTATCTGATTTTACGGCGGCATGGGAATCTTTCATCACCTGTTGCCCTGATGTTGACTG
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 CGAGGAGGAAGCACTGAAGCAGTTCAAGCAGAAGTTTACGAGGCGCCTCAGGGAAAGCTGGACTACTAAA
 GTGAACTGGATGGCTCACACAGTACGGAAGACTACAGGTCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR223909 representing NM_029094

Red=Cloning site Green=Tags(s)

MPPAMADNLDIWAQDSQIASDGAISVDFLLPTGIYIQLEVPREATISYIKQMLWKQVHNYPMFNLLMDID
 SYMFACVNTAVYEELEDETRRLCDVRPFLPVLKLVTRSCDPAEKLDSKIGVLIGKGLHEFDALKDPEVN
 EFRRKMRKFSEAKIQSLVGLSWIDWLKHTYPPEHEPSVLENLEDKLYGGKLVAVHFENSQDVSFQVSP
 NLNPIKINELAIQKRLTIRGKEDEASPCDYVLQVSGRVEYVFGDHPLIQFYIRNCVMNRTLPHFILVEC
 CKIKKMYEQEMIAIEAAINRNSSNLPLPLPPKTRVISHIWDNNPFQITLVKGNKLNTEETVKVHVRAG
 LFHGTELLCKTVVSSEISGKNDHIWNEQLEFDINICDLPRMARLCAVYAVLKVTKKSTKTINPSKYQ
 TIRKAGKVHYPVAVVNTMVFDFKQLRSGDVILHSWSSFDELEMLNPMGTQVQTNPYAENATALHITFP
 ENKKQPCYYPFDKIEKAAELASGDSANVSSRGGKFLAVLKEILDRDPLSQLCENEMDLIWTLRQDCR
 ENFPQSLPKLLLSIKWNLLEDVAQLQALLQIWPKLPPREALELLDFNYPDQYVREYAVGCLRQMSDEELS
 QYLLQLVQLKYEPFLDCALSRFLLERALDNRRIQGLFWHLRSEVHTPAVSQVFGVILEAYCRGSGVGHM
 KVLKQVEALNKLKTLNSLIKLNKLSRAKGEAMHTCLKQSAYREALSDLQSPNPCIILSELVYEKC
 KYMSKMKPLWL VYSSRAFGEDSVGVIKNGDDLQDMLTLQMLRLMDLLWKEAGLDRMLPYGCLATGD
 RSLGIEVVSTSETIADIQLNSSNVAATAAFNKDALLNWLKEYNSGDDLDRAIIEFTLSCAGYCVASYVLG
 IGDRHSDNIMVKKTGQLFHIDFGHILGNFKSKFGIKRERVFFILTYDFIHVIQQGKTGNTEKFRFRQCC
 EDAYLILRRHGNLFIITLFAFMLTAGLPELTSVKDIQYLKDSLALGKSEEEALKQFKQKQFDEALRESWTTK
 VNMAHTVRKDYRS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/ja1575_e01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_029094

ORF Size: 3192 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_029094.3](#), [NP_083370.2](#)

RefSeq Size: 4854 bp

RefSeq ORF: 3195 bp

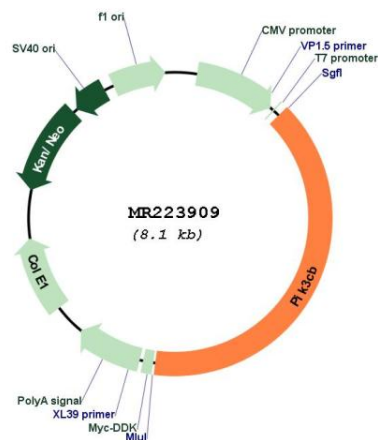
Locus ID: 74769

UniProt ID: [Q8BTI9](#)

Cytogenetics: 9 E3.3
MW: 122.2 kDa

Gene Summary: Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns (Phosphatidylinositol), PtdIns4P (Phosphatidylinositol 4-phosphate) and PtdIns(4,5)P₂ (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP₃). PIP₃ plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Involved in the activation of AKT1 upon stimulation by G-protein coupled receptors (GPCRs) ligands such as CXCL12, sphingosine 1-phosphate, and lysophosphatidic acid. May also act downstream receptor tyrosine kinases. Required in different signaling pathways for stable platelet adhesion and aggregation. Plays a role in platelet activation signaling triggered by GPCRs, alpha-IIb/beta-3 integrins (ITGA2B/ ITGB3) and ITAM (immunoreceptor tyrosine-based activation motif)-bearing receptors such as GP6. Regulates the strength of adhesion of ITGA2B/ ITGB3 activated receptors necessary for the cellular transmission of contractile forces. Required for platelet aggregation induced by F2 (thrombin) and thromboxane A2 (TXA2). Has a role in cell survival. May have a role in cell migration. Involved in the early stage of autophagosome formation. Modulates the intracellular level of PtdIns3P (Phosphatidylinositol 3-phosphate) and activates PIK3C3 kinase activity. May act as a scaffold, independently of its lipid kinase activity to positively regulate autophagy. May have a role in insulin signaling as scaffolding protein in which the lipid kinase activity is not required. May have a kinase-independent function in regulating cell proliferation and in clathrin-mediated endocytosis. Mediator of oncogenic signal in cell lines lacking PTEN. The lipid kinase activity is necessary for its role in oncogenic transformation. Required for the growth of ERBB2 and RAS driven tumors.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR223909