

Product datasheet for MR211516

Pik3cd (NM_001164052) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Pik3cd (NM_001164052) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Pik3cd
Synonyms: 2410099E07Rik; 2610208K16Rik; AW545373; p110delta
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >MR211516 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGCCCCCTGGGGTGGACTGCCCATGGAGTTCTGGACCAAGAGGAGAGCCAGAGCGTGGTTGTTGACT
 TCTTGCTGCCACAGGGGTCTACTTGAACCTCCCGTGTCCCGCAATGCCAACCTCAGCACCATCAAGCA
 GGTGCTGTGGCACCCTGCACAGTATGAGCCACTTCCACATGCTCAGTGACCCCGAGGCCATGTGTTT
 ACCTGTGTGAACCAGACGGCGGAGCAGCAGGAGTTGGAGGATGAGCAGCGGAGGCTGTGCGACATCCAGC
 CCTTCTGCCCGTGTGCGCTGGTGGCCCGAGAGGGGGACCGCTGAAGAAGCTCATTAACTCTCAGAT
 CAGCCTCCTCATTGGCAAAGGTCTCCATGAGTTTGATTCCCTGCGGGACCCGGAAGTAAACGACTTCCGC
 ACTAAGATGCGCCAGTTTTGTGAAGAGGCTGCTGCTCACCGCCAGCAGCTGGGCTGGGTGGAATGGCTGC
 AGTACAGCTTCCCCCTGCAGCTGGAGCCCTCAGCAAGGGGTTGGCGGGCCGGCTTATTGCGTGTGAGCA
 CCGAGCCCTGCTGGTCAACGTGAAGTTCGAGGGCAGTGAGGAGAGCTTACCTTCCAGGTATCCACCAAG
 GACATGCCCTGGCACTGATGGCTGTGCCCTCCGAAAAAGGCCACAGTGTCCGGCAGCCTCTGGTGG
 AGCAGCCTGAGGAATATGCCCTGCAGGTGAACGGGAGGCAGCAATACCTTACGGCAACTACCCGCTCTG
 CCACTTTCAGTACATCTGCAGCTGCCTACACAGCGGGCTGACCCCTCATCTGACCATGGTCCACTCCTCC
 TCCATCCTTGCTATGCGGGATGAGCAGAGCAATCCTGCCCCCAAGTACAGAAACCAGTGCACAAACCTC
 CCCCAGTCCCTGCCAAGAAGCCCTCCTCTGTGTCCCTGTGGTCCCTGGAACAGCCATTCTCCATTGAGCT
 GATCGAGGGCCGAAAAGTGAATGCTGACGAGCGGATGAAGCTGGTTGTTGAGCCGGGCTCTTCCATGGC
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 GACTGGAGTTCGATATCAGCGTCTGTGACCTCCCGCGCATGGCTCGACTCTGTTTTGCTCTATGCCGT
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ATCCTGGAGCTGGGGCGTCACGGGGAGCGTGGGCGCATCACGGAGGAGGAGCAGCTGCAGCTGCGGGAGA
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 AGTCCAGGAGCATTTCCAGAGGCGCTGGCCCGCTGCTGCTGGTACCAAGTGAATAAACATGAGGAT
 GTGGCCAGATGCTCTATTTGCTGTGCTCCTGGCCGAGCTGCCTGTGCTGAGCGCCCTGGAACCTCTGG
 ACTTTAGCTTTCCCGACTGCTACGTGGGCTCCTTCGCCATCAAGTCCCTTCGGAAGCTGACGGACGATGA
 GCTCTTCCAGTACCTTCTGCAGCTGGTCAAGTCTCAAATATGAGTCTACCTGGACTGCGAGCTGACC
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 CCACATGAAGGTCTGATGAAGCAGGGGAAGCACTGAGCAAGCTTAAGGCACTGAATGACTTTGTGAAG
 GTGAGTCCCAGAAGACCACCAAGCCCCAAACCAAGGAGATGATGCATATGTGCATGCGCCAGGAGACCT
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 ACCCTGGGGAGGCCCTGGATCGGGCCATTGAGGAATTCACCCTCTCTGTGCTGGCTACTGTGTGGCCAC
 ATATGTGCTGGGCATCGGTGACCGGCACAGCGACAACATCATGATCAGAGAGAGTGGGCAGCTCTTCCAC
 ATTGATTTGGCCACTTCTGGGAACTTCAAGACCAAGTTTGAATCAACCGAGAGCGCGTCCCCTTCA
 TTCTCACCTACGACTTTGTCCACGTGATCCAGCAGGGGAAGACTAACACAGTGAGAAGTTTGAAGGTT
 CCGAGGCTACTGTGAACGAGCCTACACCATCCTGCGGCCACGGGCTGCTTTTCTCCATCTCTTCGCC
 CTGATGCGGGCCGAGGTCTGCCTGAGCTTAGTTGCTCCAAGATATCCAGTATCTCAAGGACTCTCTGG
 CACTGGGAAGACGGAGGAAGAGCGCTAAAGCACTTCCGGTGAAGTTCAACGAAGCTCTCCGAGAAAG
 CTGGAAAACCAAAGTCAACTGGCTGGCGCAAAATGTGTCCAAGGATAACCGACAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR211516 protein sequence
 Red=Cloning site Green=Tags(s)

MPPGVDCPMEFWTKESQSVVVDLFLPTGVYLNFPVSRNANLSTIKQVLWHRAQYEPLFHMLSDPEAYVF
 TCYNQTAEQELEDQRRLCDIQPFLPVLRLVAREGDRVKKLINSQISLLIGKGLHEFDSLDRPEVNDFR
 TKMRQFCEEAAAHRQQLGWVEWLQYSFPLQLEPSARGWRAGLLRVSNRALLVNVKFESEESFTFQVSTK
 DMPLALMACALRKKATVFRQPLVEQPPEYALQVNGRHEYLGNYP LCHFQYICSLHSLGTPHLTMVHSS
 SILAMRDEQSNPAPQVQKPRAKPPP IPAKKPSSVSLWSLEQPF SIELIEGRKVNADERMMLVVQAGLFHG
 NEMLCKTVSSSEVNVCSPEVWQRL EFDI SVCDLPRMARL CFAL YAVVEKAKKARSTKKKSKKADCP IAW
 ANLMLFDYKDLK TGERCLYMWPSVPDEK GELLNPA GTVRGNPNTESAAALVIYLP EVAPHPVYFP ALEK
 ILELGRHGERGRIT EEEQLQLREILERRSGEL YEHEKDLVWKM RHEVQEHFPEALARLLLVTKWNKHED
 VAQMLYLLCSWPELPVLSALELLDF SFPDCYVGSFAIKSLRKL TDELFQYLLQLVQVLKYESYLDELCT
 KFLLGRALANRKIGHFLFWHLRSEMHPVALRFGLIMEAYCRGSTHMKVLMKQGEALSKLKALNDFVK
 VSSQKTTKPTKEMMHCMRQET YMEALSHLQSPLDPSTLLEEVC SVEQCTFMDSKMKPLWIMYSSEEAG
 SAGNVGIIFKNGDDL RQDMLTLQMIQLMDVLWKQ EGLDLRMTPTYGCLPTGDRTGLIEVVLHSDTIANIQL
 NKS NMAATAAFNKDALLNLKSKNPGEALDRAIEEFTL SCAGYCVATYV LIGDRHSDNIMIRESGQLFH
 IDFGHFLGNFKTKFGINRERVPI LTYDFVHVIQQGKTNNSEKFERFRGYCERAYTILRRHGLLFLHLFA
 LMRAAGLPELSCSKDIQYLKDSLALGKTEEEALKHFRVKFNEALRESWKTKVNWLAHNVS KDNRQ

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_001164052

ORF Size: 3138 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 Size: 4636 bp

RefSeq ORF: 3132 bp

Locus ID: 18707

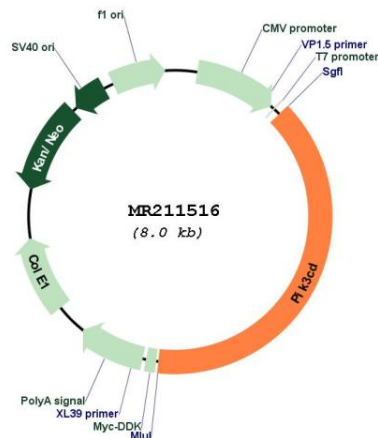
UniProt ID: [O35904](#)

Cytogenetics: 4 E2

MW: 119.9 kDa

Gene Summary: Phosphoinositide-3-kinase (PI3K) that phosphorylates 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. Mediates immune responses. Plays a role in B-cell development, proliferation, migration, and function. Required for B-cell receptor (BCR) signaling. Mediates B-cell proliferation response to anti-IgM, anti-CD40 and IL4 stimulation. Promotes cytokine production in response to TLR4 and TLR9. Required for antibody class switch mediated by TLR9. Involved in the antigen presentation function of B-cells. Involved in B-cell chemotaxis in response to CXCL13 and sphingosine 1-phosphate (S1P). Required for proliferation, signaling and cytokine production of naive, effector and memory T-cells. Required for T-cell receptor (TCR) signaling. Mediates TCR signaling events at the immune synapse. Activation by TCR leads to antigen-dependent memory T-cell migration and retention to antigenic tissues. Together with PIK3CG participates in T-cell development. Contributes to T-helper cell expansion and differentiation. Required for T-cell migration mediated by homing receptors SELL/CD62L, CCR7 and S1PR1 and antigen dependent recruitment of T-cells. Together with PIK3CG is involved in natural killer (NK) cell development and migration towards the sites of inflammation. Participates in NK cell receptor activation. Have a role in NK cell maturation and cytokine production. Together with PIK3CG is involved in neutrophil chemotaxis and extravasation. Together with PIK3CG participates in neutrophil respiratory burst. Have important roles in mast-cell development and mast cell mediated allergic response. Involved in stem cell factor (SCF)-mediated proliferation, adhesion and migration. Required for allergen-IgE-induced degranulation and cytokine release. The lipid kinase activity is required for its biological function.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR211516