

Product datasheet for MR225827

Pik3cd (NM_008840) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pik3cd (NM_008840) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pik3cd
Synonyms:	2410099E07Rik; 2610208K16Rik; AW545373; p110delta
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR225827 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCCCCTGGGGTGGACTGCCCATGGAGTTCTGGACCAAGAGGAGAGCCAGAGCGTGGTTGTTGACT
TCTTGCTGCCACAGGGTCTACTTGAACCTCCCGTGTCCCGCAATGCCAACCTCAGCACCATCAAGCA
GGTGTGTGGCACCCTGCACAGTATGAGCCACTTCCACATGCTCAGTGACCCCGAGGCCTATGTGTT
ACCTGTGTGAACCAGACGGCGGAGCAGCAGGAGTTGGAGGATGAGCAGCGGAGGCTGTGCGACATCCAGC
CCTTCTGCCCGTGTGCGCCTCGTGGCCCGAGAGGGGACCGCGTGAAGAAGCTCATTAACTCCAGAT
CAGCCTCCTCATTGGCAAAGGTCTCCATGAGTTTGATTCCCTGCGGGACCCGGAAGTAAACGACTCCGC
ACTAAGATGCGCCAGTTTTGTGAAGAGGCTGCTGCTCACCGCCAGCAGCTGGGCTGGGTGGAATGGCTGC
AGTACAGCTTCCCGTGCAGCTGGAGCCCTCAGCAAGGGGTTGGCGGGCCGGCTTATTGCGTGTGAGCA
CCGAGCCCTGTGGTCAACGTGAAGTTCGAGGGCAGTGGAGAGCTTCCCTCCAGGTATCCACCAAG
GACATGCCCTGGCACTGATGGCCTGTGCCCTCCGAAAAAGGCCACAGTGTCCGGCAGCCTCTGGTGG
AGCAGCCTGAGGAATATGCCCTGCAGTGAACGGGAGGCACGAATACCTACGGCACTACCCGCTGTG
CCACTTTTCAGTACATCTGCAGCTGCCTACACAGCGGGCTGACCCCTCATCTGACCATGGTCCACTCCTC
TCCATCCTTGCTATGCGGGATGAGCAGAGCAATCCTGCCCCCAAGTACAGAAACCAGTGCCTAAACCTC
CCCCGATCCCTGCCAAGAAGCCCTCCTCTGTGTCCCTGTGGTCCCTGGAACAGCCATTCTCCATTGAGCT
GATCGAGGGCCGAAAAAGTGAATGCTGACGAGCGGATGAAGCTGGTTGTTGAGCCGGGCTCTCCATGGC
AATGAGATGCTGTGCAAGACTGTGTCAAGCTCGGAGGTGAATGTATGCTCAGAGCCCGTGTGGAAGCAGC
GACTGGAGTTCGATATCAGCGTCTGTGACCTCCCGCGCATGGCTCGACTCTGTTTTGCTCTATGCCGT
CGTGGAGAAGGCTAAGAAGGCACGCTCCACAAAGAAGAAGTCTAAGAAGGCGGACTGCCCATCGCTTGG
GCCAACCTCATGTATTGACTACAAAGATCAGCTCAAGACGGGGAGCGCTGCCTCTACATGTGGCCCT
CTGTCCCAGATGAGAAGGGAGAGCTGCTGAATCCTGCGGGTACAGTGCCGGGGAACCCCAACACGGAGAG
TGCCGCTGCCCTGGTCTACCTGCCTGAGGTGGCCCCCACCCTGTGTACTTCCCGCTCTGGAGAAG
ATCCTGGAGCTGGGGCGTCACGGGGAGCGTGGGCGCATACGGAGGAGGAGCAGCTGCAGCTGCGGGAGA



[View online >](#)

TCCTGGAACGGCGGGGATCCGGGGAACGTACGAACATGAGAAGGACCTGGTGTGGAAGATGCGCCACGA
 AGTCCAGGAGCATTTCCAGAGGCGCTGGCCCGCTGCTGCTGGTACCAAGTGGAAATAACACGAGGAT
 GTGGCCAGATGCTCTATTTGCTGTGCTCCTGGCCGAGCTGCCTGTGCTGAGCGCCCTGGAACCTCTGG
 ACTTTAGCTTTCCCGACTGCTACGTGGGCTCCTTCGCCATCAAGTCCCTTCGGAAGCTGACGGACGATGA
 GCTCTTCCAGTACCTTCTGCAGCTGGTGAAGTCTCAAATATGAGTCTACCTGGACTGCGAGCTGACC
 AAATCTTGTCTGGCCGAGCCCTGGCTAACCGCAAGATCGGACACTTCTGTTCTGGCACCTCCGCTCTG
 AGATGCAGTACCATCAGTGGCTCTGCGGTTTGGTCTCATCATGGAAGCCTACTGCAGAGGCAGCACCCA
 CCACATGAAGGTCTGATGAAGCAGGGGAAGCACTGAGCAAGCTTAAGGCACTGAATGACTTTGTGAAG
 GTGAGTTCCAGAAAGACCACCAAGCCCCAAACCAAGGAGATGATGCATATGTGCATGCGCCAGGAGACCT
 ACATGGAGGCCCTGTCCACCTGCAGTCTCCACTCGACCCAGCACCCCTGCTGGAGGAAGTCTGTGTGGA
 GCAGTGCACCTTCATGGACTCCAAAATGAAGCCCTGTGGATCATGTACAGCAGCGAGGAGGCGGGCAGT
 GCTGGCAACGTGGGCATCATCTTAAGAACGGGGATGACCTCCGCCAGGACATGCTGACTCTGCAGATGA
 TCCAGCTCATGGACGCTCTGTGGAAGCAGGAGGGCCTGGACCTGAGGATGACGCCCTACGGCTGCCTCCC
 CACCGGGACCGCACAGGTCTCATCGAGGTGGTCTCCACTCGGACACCATCGCCAACATCCAGCTGAAC
 AAAAGCAACATGGCGGCCACAGTGCCTTCAACAAGGACGCCCTGCTCAACTGGCTCAAGTCCAAGAACC
 CTGGGGAGGCCCTGGATCGGGCCATTGAGGAATCACCCCTCTCCTGTGCTGGCTACTGTGTGGCCACATA
 TGTTCCTGGGCATCGGTGACCCGGCACAGCGACAACATCATGATCAGAGAGAGTGGGCAGCTCTTCCACATT
 GATTTTGGCCACTTTCTGGGGAACCTTCAAGACCAAGTTTGGAAATCAACCGAGAGCGCGTCCCCTTATTTC
 TCACCTACGACTTTGTCCACGTGATCCAGCAGGGGAAGACTAACAAACAGTGAAGAGTTTGAAGGTTCCG
 CGGCTACTGTGAACGAGCCTATACCATCTGCGGCCACGGGCTGCTTTTCTCCATCTCTTCCGCCTG
 ATGCGGGCCGAGGTCTGCTGAGCTTAGCTGCTCCAAAGATATCCAGTATCTCAAGGACTCTCTGGCAC
 TGGGGAAGACGGGGAAGAGGGCCTAAAGCACTTCCGGGTGAAGTTCAACGAAGCTCTCCGAGAAAGCTG
 GAAAACCAAAGTCAACTGGCTGGCGCACAATGTGTCCAAGGATAACCGACAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR225827 protein sequence
 Red=Cloning site Green=Tags(s)

MPPGVDCPMEFWTKEESQSVVVDLPTGVYLNFPVSRNANLSTIKQVLWHRAQYEPLFHMLSDPEAYVF
 TCVNQTAEQELEDQRRLCDIQPFLPVLRLVAREGDRVKKLINSQISLLIGKGLHEFDSLDPVNDFR
 TKMRQFCEEAHRQQLGWVEWLQYSFPLQLEPSARGWRAGLLRVSNRALLVNVKFESEESFTFQVSTK
 DMPLALMACALRKKATVFRQPLVEQPEEYALQVNGRHEYLGNYPPLCHFQYICSLHSGLTPHLTMVHSS
 SILAMRDEQSNPAPQVQKPRAKPPPAPAKKPSVSLWSLEQPFSEIELIEGRKVNADERMMLVVQAGLFHG
 NEMLCKTVSSSEVNVCSPEVWKQRLEFDISVCDLPRMARLFCALYAVVEKAKKARSTKKKSKKADCP
 ANLMLFDYKDLKTGERCLYMWPSVPDEKGELLNPAGTVRGNPNTESSAALVIYLPVAPHPVYFPALEK
 ILELGRHGERGRITEEEQLQLREILERRGSGELYEHEKDLVWKMREVEHFPEALARLLLVTKWKNHED
 VAQMLYLLCSWPELPVLSALELLDFSPDCYVGSFAIKSLRKLTDDELQYLLQLVQVLKYESYLDCELT
 KFLLGRALANRKIGHFLFWHLRSEMHPVALRFGLIMEAYCRGSTHMKVLMKQGEALSKLKALNDFVK
 VSSQKTKPQTKEMMHCMRQETymealshlqspldpstllEEVCVEQCTFMDSKMKPLWIMYSSEEAGS
 AGNVGIIFKNGDDLQDMLTLQMIQLMDVLWQEGDLRMTYPYGLPTGDRGLIEVVLHSDTIANIQLN
 KSNMAATAAFNKDALLNLWLSKNPGEALDRAIEEFTLSCAGYCVATYVIGIGDRHSDNIMIRESGQLFHI
 DFGHFLGNFKTKFGINRERVPIITYDFVHVIQGGKTNNSEKFERFRGYCERAYTILRRHGLLFLHLFAL
 MRAAGLPELSCSKDIQYLKDSLALGKTEEEALKHFRVKNFNEALRESWKTKVNWLAHNVSKDNRQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-Mlul

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:	<ol style="list-style-type: none">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:	<u>NM_008840.3</u> , <u>NP_032866.2</u>
RefSeq Size:	5102 bp
RefSeq ORF:	3135 bp
Locus ID:	18707
Cytogenetics:	4 E2
MW:	119.8 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]