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Product datasheet for MR225839

Pik3cd (NM_001164051) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pik3cd (NM_001164051) 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:	>MR225839 representing NM_001164051 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGCCCCCTGGGGTGGACTGCCCCATGGAGTTCTGGACCAAAGAGGAGAGCCAGAGCGTGGTTGTTGACT TCTTGCTGCCCACAGGGGTCTACTTGAACTTCCCCGTGTCCCGCAATGCCAACCTCAGCACCATCAAGCA GGTGCTGTGGCACCGTGCACAGTATGAGCCACTCTTCCACATGCTCAGTGACCCCGAGGCCTATGTGTTC ACCTGTGTGAACCAGACGGCGGAGCAGCAGGAGTTGGAGGATGAGCAGCGGAGGCTGTGCGACATCCAGC CCTTCCTGCCCGTGCTGCGCCTCGTGGCCCGAGAGGGGGACCGCGTGAAGAAGCTCATTAACTCCCAGAT CAGCCTCCTCATTGGCAAAGGTCTCCATGAGTTTGATTCCCTGCGGGACCCGGAAGTAAACGACTTCCGC ACTAAGATGCGCCAGTTTTGTGAAGAGGCTGCTGCTCACCGCCAGCAGCTGGGCTGGGTGGAATGGCTGC AGTACAGCTTCCCCCTGCAGCTGGAGCCCTCAGCAAGGGGTTGGCGGGCCGGCTTATTGCGTGTCAGCAA CCGAGCCCTGCTGGTCAACGTGAAGTTCGAGGGCAGTGAGGAGAGCTTCACCTTCCAGGTATCCACCAAG GACATGCCCCTGGCACTGATGGCCTGTGCCCTCCGAAAAAAGGCCACAGTGTTCCGGCAGCCTCTGGTGG AGCAGCCTGAGGAATATGCCCTGCAGGTGAACGGGAGGCACGAATACCTCTACGGCAACTACCCGCTCTG CCACTTTCAGTACATCTGCAGCTGCCTACACAGCGGGCTGACCCCTCATCTGACCATGGTCCACTCCTCC TCCATCCTTGCTATGCGGGATGAGCAGAGCAATCCTGCCCCCCAAGTACAGAAACCACGTGCCAAACCTC CCCCGATCCCTGCCAAGAAGCCCTCCTCTGTGTCCCTGTGGTCCCTGGAACAGCCATTCTCCATTGAGCT GATCGAGGGCCGAAAAGTGAATGCTGACGAGCGGATGAAGCTGGTTGTTCAGGCCGGGCTCTTCCATGGC AATGAGATGCTGTGCAAGACTGTGTCAAGCTCGGAGGTGAATGTATGCTCAGAGCCCGTGTGGAAGCAGC GACTGGAGTTCGATATCAGCGTCTGTGACCTCCCGCGCATGGCTCGACTCTGTTTTGCTCTCTATGCCGT CGTGGAGAAGGCTAAGAAGGCACGCTCCACAAAGAAGAAGTCTAAGAAGGCGGACTGCCCCATCGCTTGG GCCAACCTCATGCTATTCGACTACAAAGATCAGCTCAAGACGGGGGAGCGCTGCCTCTACATGTGGCCCT CTGTCCCAGATGAGAAGGGAGAGCTGCTGAATCCTGCGGGTACAGTGCGCGGGAACCCCAACACGGAGAG TGCCGCTGCCCTGGTCATCTACCTGCCTGAGGTGGCCCCCCACCCTGTGTACTTCCCCGCTCTGGAGAAG ATCCTGGAGCTGGGGCGTCACGGGGAGCGTGGGCGCATCACGGAGGAGGAGCTGCAGCTGCGGGAGATCC

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Protein Sequence:

>MR225839 representing NM_001164051
Red=Cloning site Green=Tags(s)

MPPGVDCPMEFWTKEESQSVVVDFLLPTGVYLNFPVSRNANLSTIKQVLWHRAQYEPLFHMLSDPEAYVF
TCVNQTAEQQELEDEQRRLCDIQPFLPVLRLVAREGDRVKKLINSQISLLIGKGLHEFDSLRDPEVNDFR
TKMRQFCEEAAAHRQQLGWVEWLQYSFPLQLEPSARGWRAGLLRVSNRALLVNVKFEGSEESFTFQVSTK
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ANLMLFDYKDQLKTGERCLYMWPSVPDEKGELLNPAGTVRGNPNTESAAALVIYLPEVAPHPVYFPALEK
ILELGRHGERGRITEEELQLREILERRGSGELYEHEKDLVWKMRHEVQEHFPEALARLLLVTKWNKHEDV
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HIDFGHFLGNFKTKFGINRERVPFILTYDFVHVIQQGKTNNSEKFERFRGYCERAYTILRRHGLLFLHLF
ALMRAAGLPELSCSKDIQYLKDSLALGKTEEEALKHFRVKFNEALRESWKTKVNWLAHNVSKDNRQ

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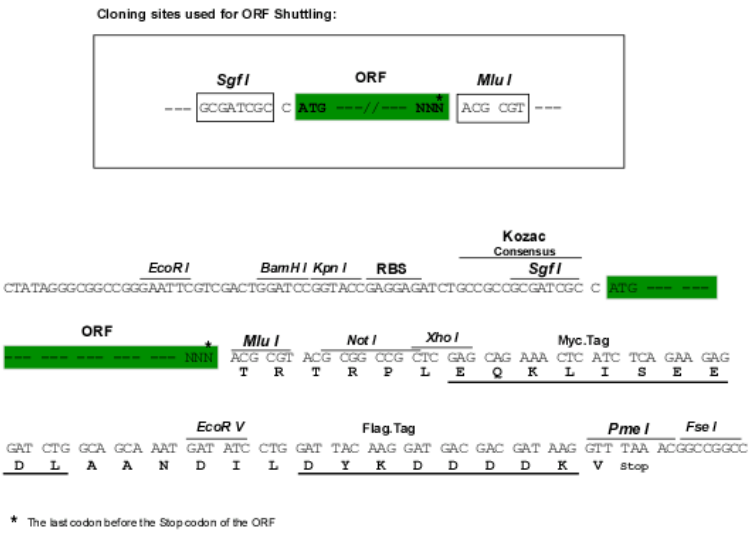
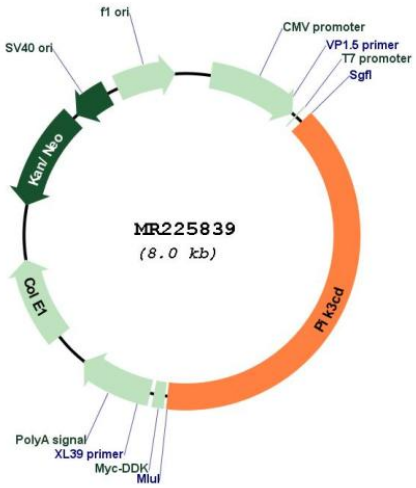
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001164051

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:	NM_001164051.1, NP_001157523.1
RefSeq Size:	4942 bp
RefSeq ORF:	3141 bp
Locus ID:	18707
Cytogenetics:	4 E2
MW:	120.5 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 PDPK1, 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]