

Product datasheet for **MC223363**

Pik3cd (NM_001029837) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Pik3cd (NM_001029837) Mouse Untagged Clone
Tag: Tag Free
Symbol: Pik3cd
Synonyms: 2410099E07Rik; 2610208K16Rik; AW545373; p110delta
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC223363 representing NM_001029837
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCCCCTGGGGTGGACTGCCCATGGAGTTCTGGACCAAGAGGAGAGCCAGAGCGTGGTTGTTGACT
TCTTGCTGCCACAGGGGTCTACTTGAACCTCCCGTGTCCGCAATGCCAACCTCAGCACCATCAAGCA
GGTGTGTGGCACCCTGCACAGTATGAGCCACTTCCACATGCTCAGTGACCCCGAGGCCTATGTGTT
ACCTGTGTGAACCAGACGGCGGAGCAGCAGGAGTTGGAGGATGAGCAGCGGAGGCTGTGCGACATCCAGC
CCTTCTGCCCGTGTGCGCCTCGTGGCCCGAGAGGGGACCGCGTGAAGAAGCTCATTAACTCCAGAT
CAGCCTCCTCATTGGCAAAGGTCTCCATGAGTTTGATTCCCTGCGGGACCCGGAAGTAAACGACTCCGC
ACTAAGATGCGCCAGTTTTGTGAAGAGGCTGCTGCTCACCGCCAGCAGCTGGGCTGGGTGGAATGGCTGC
AGTACAGCTTCCCTGCAGCTGGAGCCCTCAGCAAGGGGTTGGCGGGCCGGCTTATTGCGTGTGAGCA
CCGAGCCCTGTGGTCAACGTGAAGTTCGAGGGCAGTGGAGAGCTTCCCTCCAGGTATCCACCAAG
GACATGCCCTGGCACTGATGGCCTGTGCCCTCCGAAAAAGGCCACAGTGTCCGGCAGCCTCTGGTGG
AGCAGCCTGAGGAATATGCCCTGCAGTGAACGGGAGGCACGAATACCTACGGCACTACCCGCTCG
CCACTTTTCAGTACATCTGCAGCTGCCTACACAGCGGGCTGACCCCTCATCTGACCATGGTCCACTCCTC
TCCATCCTTGCTATGCGGGATGAGCAGAGCAATCCTGCCCCCAAGTACAGAAACCACGTGCCAAACCTC
CCCCGATCCCTGCCAAGAAGCCCTCCTCTGTGTCCCTGTGGTCCCTGGAACAGCCATTCTCCATTGAGCT
GATCGAGGGCCGAAAAAGTGAATGCTGACGAGCGGATGAAGCTGGTTGTTCCAGCCGGGCTCTTCCATGGC
AATGAGATGCTGTGCAAGACTGTGTCAAGCTCGGAGGTGAATGTATGCTCAGAGCCCGTGTGGAAGCAGC
GACTGGAGTTCGATATCAGCGTCTGTGACCTCCCGCGCATGGCTCGACTCTGTTTTGCTCTATGCCGT
CGTGGAGAAGGCTAAGAAGGCACGCTCCACAAAGAAGAAGTCTAAGAAGGCGGACTGCCCATCGCTTGG
GCCAACCTCATGTATTCTGACTACAAAGATCAGCTCAAGACGGGGAGCGCTGCCTCTACATGTGGCCCT
CTGTCCCAGATGAGAAGGGAGAGCTGCTGAATCCTGCGGGTACAGTGCGCGGGAACCCCAACACGGAGAG
TGCCGCTGCCCTGGTCTACCTGCCTGAGGTGGCCCCCACCCTGTGTACTTCCCGCTCTGGAGAAG
ATCCTGGAGCTGGGGCGTACGGGGAGCGTGGGCGCATACGGAGGAGGAGCAGCTGCAGCTGCGGGAGA



TCCTGGAACGGCGGGGATCCGGGGAACGTACGAACATGAGAAGGACCTGGTGTGGAAGATGCGCCACGA
 AGTCCAGGAGCATTTCCAGAGGCGCTGGCCCGCTGCTGCTGGTACCAAGTGAATAAACACGAGGAT
 GTGGCCAGCTGTCCAGATGCTCTATTTGCTGTGCTCTGGCCCGAGCTGCCTGTGCTGAGCGCCCTGG
 AACTTCTGGACTTTAGCTTTCCGACTGCTACGTGGGCTCCTTCGCCATCAAGTCCCTTCGGAAGCTGAC
 GGACGATGAGCTTTCCAGTACCTTCTGCAGCTGGTGAAGTGTCAAATATGAGTCTACCTGGACTGC
 GAGCTGACCAAATCTTGCTGGCCGAGCCCTGGCTAACCGAAGATCGGACACTTCTGTTCTGGCACC
 TCCGCTCTGAGATGCACGTACCATCAGTGGCTCTGCGGTTTGGTCTCATCATGGAAGCTACTGCAGAGG
 CAGCACCCACCACATGAAGGTGCTGATGAAGCAGGGGGAAGCACTGAGCAAGCTTAAGGCACTGAATGAC
 TTTGTGAAGGTGAGTTCCAGAAGACCACCAAGCCCCAAACCAAGGAGATGATGCATATGTGCATGCGCC
 AGGAGACCTACATGGAGGCCCTGTCCCACCTGCAGTCTCCACTCGACCCAGCACCTGTGGAGGAAGT
 CTGTGTGGAGCAGTGCACCTTTCATGGACTCCAAAATGAAGCCCTGTGGATCATGTACAGCAGCGAGGAG
 GCGGGCAGTGTGGCAACGTGGGCATCATCTTTAAGAACGGGGATGACCTCCGCCAGGACATGCTGACTC
 TGCAGATGATCCAGCTCATGGACGTCTGTGGAAGCAGGAGGGCCTGGACCTGAGGATGACGCCCTACGG
 CTGCTCCACCAGGGGACCGCACAGGTCTCATCGAGGTGGTCTCCACTCGGACACCATCGCCAACATC
 CAGCTGAACAAAAGCAACATGGCGGCCACAGCTGCCTTCAACAAGGACGCCCTGCTCAACTGGCTCAAGT
 CCAAGAACCCTGGGGAGGCCCTGGATCGGGCCATTGAGGAATTCACCCTCTCTGTGCTGGCTACTGTGT
 GGCCACATATGTTCTGGGCATCGGTGACCGGCACAGCGACAACATCATGATCAGAGAGAGTGGGCAGCTC
 TTCCACATTGATTTTGGCCACTTTCTGGGGAACCTCAAGACCAAGTTTGGAAATCAACCGAGAGCGCGTCC
 CCTTACATCTCACCTACGACTTTGTCCACGTGATCCAGCAGGGGAAGACTAACACAGTGAGAAGTTTGA
 AAGTTCCGCGGCTACTGTGAACGAGCCTATACCATCTGCGGCGCCACGGGCTGCTTTTCTCCATCTC
 TTCGCCCTGATGCGGGCCGAGGTCTGCCTGAGCTTAGCTGTCCAAAGATATCCAGTATCTCAAGGACT
 CTCTGGCACTGGGAAGACGGAGGAAGAGGCGCTAAAGCACTTCCGGGTGAAGTTCAACGAAGCTCTCCG
 AGAAAGCTGGAACCAAAAGTCAACTGGCTGGCGCACAATGTGTCCAAGGATAACCGACAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

SgfI-MluI

ACCN:

NM_001029837

Insert Size:

3144 bp

OTI Disclaimer:

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_001029837.2, NP_001025008.2

RefSeq Size:

4909 bp

RefSeq ORF:

3144 bp

Locus ID: 18707

Cytogenetics: 4 E2

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]

Transcript Variant: This variant (2) represents use of an alternate promoter and 5' UTR and uses an alternate in-frame splice site in the central coding region, compared to variant 4. The resulting isoform (b) includes an additional 3-aa internal segment, compared to isoform c. Both variants 2 and 3 encode the same isoform.