

Product datasheet for **MC223024**

Pik3cd (NM_001164052) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Pik3cd (NM_001164052) 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: >MC223024 representing NM_001164052
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCCCCCTGGGGTGGACTGCCCATGGAGTTCTGGACCAAGAGGAGAGCCAGAGCGTGGTTGTTGACT
 TCTTGCTGCCACAGGGGTCTACTTGAACCTCCCGTGTCCGCAATGCCAACCTCAGCACCATCAAGCA
 GGTGCTGTGGCACCCTGCACAGTATGAGCCACTTCCACATGCTCAGTGACCCCGAGGCCTATGTGTT
 ACCTGTGTGAACCAGACGCGGAGCAGCAGGAGTTGGAGGATGAGCAGCGGAGGCTGTGCGACATCCAGC
 CCTTCTGCCCGTGTGCGCCTCGTGGCCCGAGAGGGGACCGCGTGAAGAAGCTCATTAACTCCAGAT
 CAGCCTCCTCATTGGCAAAGGTCTCCATGAGTTTGATTCCCTGCGGGACCCGGAAGTAAACGACTCCGC
 ACTAAGATGCGCCAGTTTTGTGAAGAGGCTGCTGCTCACCGCCAGCAGCTGGGCTGGGTGGAATGGCTGC
 AGTACAGCTTCCCTGCAGCTGGAGCCCTCAGCAAGGGGTTGGCGGGCCGGCTTATTGCGTGTGAGCA
 CCGAGCCCTGTGGTCAACGTGAAGTTCGAGGGCAGTGAAGAGAGCTTCCCTCCAGGTATCCACCAAG
 GACATGCCCTGGCACTGATGGCCTGTGCCCTCCGAAAAAGGCCACAGTGTCCGGCAGCCTCTGGTGG
 AGCAGCCTGAGGAATATGCCCTGCAGTGAACGGGAGGCACGAATACCTCTACGGCACTACCCGCTCG
 CCACTTTTCAGTACATCTGCAGCTGCCTACACAGCGGGCTGACCCCTCATCTGACCATGGTCCACTCCTC
 TCCATCCTTGCTATGCGGGATGAGCAGAGCAATCCTGCCCCCAAGTACAGAAACCACGTGCCAAACCTC
 CCCCAGTCCCTGCCAAGAAGCCCTCCTCTGTGTCCTGTGGTCCCTGGAACAGCCATTCTCCATTGAGCT
 GATCGAGGGCCGAAAAAGTGAATGCTGACGAGCGGATGAAGCTGGTTGTTGAGCCGGGCTCTCCATGGC
 AATGAGATGCTGTGCAAGACTGTGTCAAGCTCGGAGGTGAATGTATGCTCAGAGCCCGTGTGGAAGCAGC
 GACTGGAGTTCGATATCAGCGTCTGTGACCTCCCGCGCATGGCTCGACTCTGTTTTGCTCTATGCCGT
 CGTGGAGAAGGCTAAGAAGGCACGCTCCACAAAGAAGAAGTCTAAGAAGGCGGACTGCCCATCGCTTGG
 GCCAACCTCATGTATTGACTACAAAGATCAGCTCAAGACGGGGAGCGCTGCCTCTACATGTGGCCCT
 CTGTCCCAGATGAGAAGGGAGAGCTGCTGAATCCTGCGGGTACAGTGCGCGGGAACCCCAACACGGAGAG
 TGCCGCTGCCCTGGTCTACCTGCCTGAGGTGGCCCCCACCCTGTGTACTTCCCGCTCTGGAGAAG
 ATCCTGGAGCTGGGGCGTACGGGGAGCGTGGGCGCATACGGAGGAGGAGCTGCAGCTGCGGGAGATCC



TGGAACGGCGGGGATCCGGGAACTGTACGAACATGAGAAGGACCTGGTGTGGAAGATGCGCCACGAAGT
 CCAGGAGCATTTCCAGAGGCGCTGGCCCGCTGCTGCTGGTACCAAGTGAATAAACACGAGGATGTG
 GCCCAGATGCTCTATTTGCTGTGCTCCTGGCCGAGCTGCCTGTGCTGAGCGCCCTGGAACCTTCTGGACT
 TTAGCTTTCCCGACTGCTACGTGGGCTCCTTCGCCATCAAGTCCCTTCGGAAGCTGACGGACGATGAGCT
 CTTCCAGTACCTTCTGCAGCTGGTGCAAGTGTCAAATATGAGTCTACCTGGACTGCGAGCTGACCAAA
 TTCTTGTGGCCGAGCCCTGGTAACCGAAGATCGGACACTTCTGTTCTGGACCTCCGCTCTGAGA
 TGCACGTACCATCAGTGGCTCTGCGGTTTGGTCTCATCATGGAAGCCTACTGCAGAGGCAGCACCCACCA
 CATGAAGGTGCTGATGAAGCAGGGGAAGCACTGAGCAAGCTTAAGGCACTGAATGACTTTGTGAAGGTG
 AGTTCCAGAAAGACCACCAAGCCCAAACCAAGGAGATGATGCATATGTGCATGCGCCAGGAGACCTACA
 TGGAGGCCCTGTCCACCTGCAGTCTCCACTCGACCCAGCACCTGCTGGAGGAAGTCTGTGTGGAGCA
 GTGCACCTTCATGGACTCCAAAATGAAGCCCTGTGGATCATGTACAGCAGCGAGGAGGCGGGCAGTGT
 GGCAACGTGGGCATCATCTTTAAGAACGGGGATGACCTCCGCCAGGACATGCTGACTCTGCAGATGATCC
 AGCTCATGGACGTCTGTGGAAGCAGGAGGGCCTGGACCTGAGGATGACGCCCTACGGCTGCCTCCCCAC
 CGGGACCGCACAGGTCTCATCGAGGTGGTCTCCACTCGGACACCATCGCCAACATCCAGCTGAACAAA
 AGCAACATGGCGGCCACAGCTGCCTTCAACAAGGACGCCCTGCTCAACTGGCTCAAGTCCAAGAACCCTG
 GGGAGGCCCTGGATCGGGCCATTGAGGAATTCACCTCTCCTGTGCTGGCTACTGTGTGGCCACATATGT
 TCTGGGCATCGGTGACCGGCACAGCGACAACATCATGATCAGAGAGAGTGGGCAGCTCTCCACATTGAT
 TTTGGCCACTTTCTGGGAACTTCAAGACCAAGTTTGAATCAACCGAGAGCGCGTCCCCTTCATTCTCA
 CCTACGACTTTGTCCACGTGATCCAGCAGGGGAAGACTAACACAGTGAAGATTTGAAAGTTCCGCGG
 CTACTGTGAACGAGCCTATACCATCCTGCGGCCACGGGCTGCTTTTCTCCATCTCTTCGCCCTGATG
 CGGGCCGACAGTCTGCCTGAGCTTAGCTGCTCAAAGATATCCAGTATCTCAAGGACTCTCTGGCACTGG
 GGAAGACGGAGGAAGAGGCGCTAAAGCACTTCCGGTGAAGTTCAACGAAGCTCTCCGAGAAAGCTGGAA
 AACCAAAGTCAACTGGCTGGCGCACAATGTGTCCAAGGATAACCGACAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001164052
- Insert Size:** 3132 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_001164052.1, NP_001157524.1
- RefSeq Size:** 4636 bp
- RefSeq ORF:** 3132 bp

Locus ID: 18707

UniProt ID: [O35904](#)

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 (1) uses an alternate in-frame splice site in the central coding region, compared to variant 4. The promoter and 5' UTR for this variant has not been determined. The resulting isoform (a) lacks a 1-aa internal segment, compared to isoform a.

Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.