

## Product datasheet for **MC223366**

### Pik3cd (NM\_001164050) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Pik3cd (NM\_001164050) 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:** >MC223366 representing NM\_001164050  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCCCCCTGGGGTGGACTGCCCATGGAGTTCTGGACCAAGAGGAGAGCCAGAGCGTGGTTGTTGACT  
 TCTTGCTGCCACAGGGGTCTACTTGAACCTCCCGTGTCCGCAATGCCAACCTCAGCACCATCAAGCA  
 GGTGCTGTGGCACCCTGCACAGTATGAGCCACTTCCACATGCTCAGTGACCCCGAGGCCTATGTGTT  
 ACCTGTGTGAACCAGACGGCGGAGCAGCAGGAGTTGGAGGATGAGCAGCGGAGGCTGTGCGACATCCAGC  
 CCTTCTGCCCGTGTGCGCCTCGTGGCCCGAGAGGGGACCGCGTGAAGAAGCTCATTAACTCCAGAT  
 CAGCCTCCTCATTGGCAAAGGTCTCCATGAGTTTGATTCCCTGCGGGACCCGGAAGTAAACGACTCCGC  
 ACTAAGATGCGCCAGTTTTGTGAAGAGGCTGCTGCTCACCGCCAGCAGCTGGGCTGGGTGGAATGGCTGC  
 AGTACAGCTTCCCTGCAGCTGGAGCCCTCAGCAAGGGGTTGGCGGGCCGGCTTATTGCGTGTGAGCA  
 CCGAGCCCTGTGGTCAACGTGAAGTTCGAGGGCAGTGGAGAGCTTACCTTCCAGGTATCCACCAAG  
 GACATGCCCTGGCACTGATGGCCTGTGCCCTCCGAAAAAGGCCACAGTGTCCGGCAGCCTCTGGTGG  
 AGCAGCCTGAGGAATATGCCCTGCAGTGAACGGGAGGCACGAATACCTACGGCACTACCCGCTCG  
 CCACTTTTCAGTACATCTGCAGCTGCCTACACAGCGGGCTGACCCCTCATCTGACCATGGTCCACTCCTC  
 TCCATCCTTGCTATGCGGGATGAGCAGAGCAATCCTGCCCCCAAGTACAGAAACCACGTGCCAAACCTC  
 CCCCAGTCCCTGCCAAGAAGCCCTCCTCTGTGTCCCTGTGGTCCCTGGAACAGCCATTCTCCATTGAGCT  
 GATCGAGGGCCGAAAAGTGAATGCTGACGAGCGGATGAAGCTGGTTGTTGAGCCGGGCTCTTCCATGGC  
 AATGAGATGCTGTGCAAGACTGTGTCAAGCTCGGAGGTGAATGTATGCTCAGAGCCCGTGTGGAAGCAGC  
 GACTGGAGTTCGATATCAGCGTCTGTGACCTCCCGCGCATGGCTCGACTCTGTTTTGCTCTATGCCGT  
 CGTGGAGAAGGCTAAGAAGGCACGCTCCACAAAGAAGAAGTCTAAGAAGGCGGACTGCCCATCGCTTGG  
 GCCAACCTCATGTATTGACTACAAAGATCAGCTCAAGACGGGGAGCGCTGCCTCTACATGTGGCCCT  
 CTGTCCCAGATGAGAAGGGAGAGCTGCTGAATCCTGCGGGTACAGTGCCGGGGAACCCCAACACGGAGAG  
 TGCCGCTGCCCTGGTCTACCTGCCTGAGGTGGCCCCCACCCTGTGTACTTCCCGCTCTGGAGAAG  
 ATCCTGGAGCTGGGGCGTACGGGGAGCGTGGGCGCATACGGAGGAGGAGCAGCTGCAGCTGCGGGAGA



TCCTGGAACGGCGGGGATCCGGGGAACGTACGAACATGAGAAGGACCTGGTGTGGAAGATGCGCCACGA  
 AGTCCAGGAGCATTTCCAGAGGCGCTGGCCCGCTGCTGCTGGTCAACCAAGTGAATAAACACGAGGAT  
 GTGGCCAGATGCTCTATTTGCTGTGCTCCTGGCCGAGCTGCCTGTGCTGAGCGCCCTGGAACCTCTGG  
 ACTTTAGCTTTCCCGACTGCTACGTGGGCTCCTTCGCCATCAAGTCCCTTCGGAAGCTGACGGACGATGA  
 GCTCTCCAGTACCTTCTGCAGCTGGTGAAGTCTCAAATATGAGTCTACCTGGACTGCGAGCTGACC  
 AAATCTTGTCTGGGCCGAGCCCTGGCTAACCGCAAGATCGGACACTTCTGTTCTGGCACCTCCGCTCTG  
 AGATGCACGTACCATCAGTGGCTCTGCGGTTTGGTCTCATCATGGAAGCCTACTGCAGAGGCACACCCA  
 CCACATGAAGGTCTGATGAAGCAGGGGAAGCACTGAGCAAGCTTAAGGCACTGAATGACTTTGTGAAG  
 GTGAGTTCCAGAACACCAAGCCCAACCAAGGAGATGATGCATATGTGCATGCGCCAGGAGACCT  
 ACATGGAGGCCCTGTCCACCTGCAGTCTCCACTCGACCCAGCACCCCTGCTGGAGGAAGTCTGCAGTGT  
 GGAGCAGTGCACCTTCATGGACTCCAAAATGAAGCCCCTGTGGATCATGTACAGCAGCGAGGAGGCGGGC  
 AGTGTGGCAACGTGGGCATCATCTTAAGAACGGGGATGACCTCCGCCAGGACATGCTGACTCTGCAGA  
 TGATCCAGCTCATGGACGTCTGTGGAAGCAGGAGGGCCTGGACCTGAGGATGACGCCCTACGGCTGCCT  
 CCCCACCGGGGACCGCACAGGTCTCATCGAGGTGGTCTCCACTCGGACACCATCGCCAACATCCAGCTG  
 AACAAAAGCAACATGGCGGCCACAGCTGCCTTCAACAAGGACGCCCTGCTCAACTGGCTCAAGTCCAAGA  
 ACCTGGGGAGGCCCTGGATCGGGCCATTGAGGAATTCACCTCTCCTGTGCTGGCTACTGTGTGGCCAC  
 ATATGTTCTGGGCATCGGTGACCGGCACAGCGACAACATCATGATCAGAGAGAGTGGGCAGCTCTTCCAC  
 ATTGATTTGGCCACTTTCTGGGAACTTCAAGACCAAGTTTGAATCAACCGAGAGCGCGTCCCCTTCA  
 TTCTCACCTACGACTTTGTCCACGTGATCCAGCAGGGGAAGACTAACACAGTGAGAAGTTTGAAGGTT  
 CCGCGGCTACTGTGAACGAGCCTATACCATCCTGCGGCGCCACGGGCTGCTTTTCTCCATCTCTTCGCC  
 CTGATGCGGGCCGAGGTCTGCCTGAGCTTAGCTGCTCCAAGATATCCAGTATCTCAAGGACTCTCTGG  
 CACTGGGGAAGACGGAGGAAGAGGCGCTAAAGCACTTCCGGGTGAAGTTCAACGAAGCTCTCCGAGAAG  
 CTGGAAAACCAAGTCAACTGGCTGGCGCACAATGTGTCCAAGGATAACCGACAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

Sgfl-Mlul

**ACCN:**

NM\_001164050

**Insert Size:**

3138 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\_001164050.1, NP\_001157522.1
**RefSeq Size:**

4915 bp

**RefSeq ORF:**

3138 bp

Locus ID: 18707

Cytogenetics: 4 E2

**Gene Summary:** Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns(4,5)P<sub>2</sub> (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP<sub>3</sub>). PIP<sub>3</sub> 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 (5) lacks an alternate exon in the 5' UTR and uses an alternate in-frame splice site in the central coding region, compared to variant 4. The resulting isoform (d) includes an additional 1-aa internal segment, compared to isoform c. 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.