

## Product datasheet for **MC223319**

### Pik3cd (NM\_008840) Mouse Untagged Clone

#### Product data:

|                      |   |
|----------------------|---|
| Product Type:        | Expression Plasmids   |
| Product Name:        | Pik3cd (NM_008840) 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: | >MC223319 representing NM_008840<br>Red=Cloning site Blue=ORF Orange=Stop codon |

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGCCCCCTGGGGTGGACTGCCCATGGAGTTCTGGACCAAGAGGAGAGCCAGAGCGTGGTTGTTGACT  
TCTTGCTGCCACAGGGGTCTACTTGAACCTCCCGTGTCCCGCAATGCCAACCTCAGCACCATCAAGCA  
GGTGTGTGGCACCCTGCACAGTATGAGCCACTTCCACATGCTCAGTGACCCCGAGGCCTATGTGTT  
ACCTGTGTGAACCAGACGGCGGAGCAGCAGGAGTTGGAGGATGAGCAGCGGAGGCTGTGCGACATCCAGC  
CCTTCTGCCCGTGTGCGCCTCGTGGCCCGAGAGGGGACCGCGTGAAGAAGCTCATTAACTCCAGAT  
CAGCCTCCTCATTGGCAAAGGTCTCCATGAGTTTGATTCCCTGCGGGACCCGGAAGTAAACGACTCCGC  
ACTAAGATGCGCCAGTTTTGTGAAGAGGCTGCTGCTCACCGCCAGCAGCTGGGCTGGGTGGAATGGCTGC  
AGTACAGCTTCCCTGCAGCTGGAGCCCTCAGCAAGGGGTTGGCGGGCCGGCTTATTGCGTGTGAGCA  
CCGAGCCCTGTGGTCAACGTGAAGTTCGAGGGCAGTGGAGAGCTTCCCTCCAGGTATCCACCAAG  
GACATGCCCTGGCACTGATGGCCTGTGCCCTCCGAAAAAGGCCACAGTGTCCGGCAGCCTCTGGTGG  
AGCAGCCTGAGGAATATGCCCTGCAGTGAACGGGAGGCACGAATACCTACGGCACTACCCGCTGTG  
CCACTTTTCAGTACATCTGCAGCTGCCTACACAGCGGGCTGACCCCTCATCTGACCATGGTCCACTCCTC  
TCCATCCTTGCTATGCGGGATGAGCAGAGCAATCCTGCCCCCAAGTACAGAAACCAGTGCCAAACCTC  
CCCCGATCCCTGCCAAGAAGCCCTCCTCTGTGTCCCTGTGGTCCCTGGAACAGCCATTCTCCATTGAGCT  
GATCGAGGGCCGAAAAAGTGAATGCTGACGAGCGGATGAAGCTGGTTGTTGAGCCGGGCTCTTCCATGGC  
AATGAGATGCTGTGCAAGACTGTGTCAAGCTCGGAGGTGAATGTATGCTCAGAGCCCGTGTGGAAGCAGC  
GACTGGAGTTCGATATCAGCGTCTGTGACCTCCCGCGCATGGCTCGACTCTGTTTTGCTCTATGCCGT  
CGTGGAGAAGGCTAAGAAGGCACGCTCCACAAAGAAGAAGTCTAAGAAGGCGGACTGCCCATCGCTTGG  
GCCAACCTCATGTATTGACTACAAAGATCAGCTCAAGACGGGGAGCGCTGCCTCTACATGTGGCCCT  
CTGTCCCAGATGAGAAGGGAGAGCTGCTGAATCCTGCGGGTACAGTGCGGGGAACCCCAACACGGAGAG  
TGCCGCTGCCCTGGTCTACCTGCCTGAGGTGGCCCCCACCCTGTGTACTTCCCGCTCTGGAGAAG  
ATCCTGGAGCTGGGGCGTACGGGGAGCGTGGGCGCATACGGAGGAGGAGCAGCTGCAGCTGCGGGAGA



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TCCTGGAACGGCGGGGATCCGGGGAACGTACGAACATGAGAAGGACCTGGTGTGGAAGATGCGCCACGA  
 AGTCCAGGAGCATTTCCAGAGGCGCTGGCCCGCTGCTGCTGGTCAACCAAGTGGAAATAACACGAGGAT  
 GTGGCCAGATGCTCTATTTGCTGTGCTCCTGGCCGAGCTGCCTGTGCTGAGCGCCCTGGAACCTCTGG  
 ACTTTAGCTTTCCCGACTGCTACGTGGGCTCCTTCGCCATCAAGTCCCTTCGGAAGCTGACGGACGATGA  
 GCTCTCCAGTACCTTCTGCAGCTGGTGAAGTCTCAAATATGAGTCTACCTGGACTGCGAGCTGACC  
 AAATCTTGTCTGGGCCGAGCCCTGGCTAACCGCAAGATCGGACACTTCTGTTCTGGCACCTCCGCTCTG  
 AGATGCACGTACCATCAGTGGCTCTGCGGTTTGGTCTCATCATGGAAGCCTACTGCAGAGGCAGCACCCA  
 CCACATGAAGGTCTGATGAAGCAGGGGAAGCACTGAGCAAGCTTAAGGCACTGAATGACTTTGTGAAG  
 GTGAGTCCCAGAAAGACCACCAAGCCCCAAACCAAGGAGATGATGCATATGTGCATGCGCCAGGAGACCT  
 ACATGGAGGCCCTGTCCACCTGCAGTCTCCACTCGACCCAGCACCCCTGCTGGAGGAAGTCTGTGTGA  
 GCAGTGCACCTTCATGGACTCCAAAATGAAGCCCTGTGGATCATGTACAGCAGCGAGGAGGCGGGCAGT  
 GCTGGCAACGTGGGCATCATCTTAAGAACGGGGATGACCTCCGCCAGGACATGCTGACTCTGCAGATGA  
 TCCAGCTCATGGACGCTCTGTGAAGCAGGAGGGCCTGGACCTGAGGATGACGCCCTACGGCTGCCTCCC  
 CACCGGGACCGCACAGGTCTCATCGAGGTGGTCTCCACTCGGACACCATCGCCAACATCCAGCTGAAC  
 AAAAGCAACATGGCGGCCACAGTGCCTTCAACAAGGACGCCCTGCTCAACTGGCTCAAGTCCAAGAACC  
 CTGGGGAGGCCCTGGATCGGGCCATTGAGGAATCACCCCTCTCCTGTGCTGGCTACTGTGTGGCCACATA  
 TGTCTGGGCATCGGTGACCCGGCACAGCGACAACATCATGATCAGAGAGAGTGGGCAGCTTTCCACATT  
 GATTTTGGCCACTTTCTGGGAACTTCAAGACCAAGTTTGAATCAACCGAGAGCGCGTCCCCTTCAATC  
 TCACCTACGACTTTGTCCACGTGATCCAGCAGGGGAAGACTAACCAACAGTGAAGAGTTTGAAGGTTCCG  
 CGGCTACTGTGAACGAGCCTATACCATCTGCGGCCACGGGCTGCTTTTCTCCATCTCTTCGCCCTG  
 ATGCGGGCCGAGGTCTGCTGAGCTTAGCTGCTCCAAAGATATCCAGTATCTCAAGGACTCTCTGGCAC  
 TGGGGAAGACGGGGAAGAGGCGCTAAAGCACTCCGGGTGAAGTTCAACGAAGCTCTCCGAGAAAGCTG  
 GAAAACCAAAGTCAACTGGCTGGCGCACAATGTGTCCAAGGATAACCGACAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

SgfI-MluI

**ACCN:**

NM\_008840

**Insert Size:**

3135 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\\_008840.3](#), [NP\\_032866.2](#)

**RefSeq Size:**

5102 bp

**RefSeq ORF:**

3135 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 (4) represents the longest transcript and encodes isoform c.

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