

## Product datasheet for **MG211516**

### Pik3cd (NM\_001029837) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Pik3cd (NM\_001029837) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Pik3cd  
**Synonyms:** 2410099E07Rik; 2610208K16Rik; AW545373; p110delta  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG211516 representing NM\_001029837  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCCCCCTGGGGTGGACTGCCCATGGAGTTCTGGACCAAGAGGAGAGCCAGAGCGTGGTTGTTGACT  
 TCTTGCTGCCACAGGGGTCTACTTGAACCTCCCGTGTCCGCAATGCCAACCTCAGCACCATCAAGCA  
 GGTGCTGTGGCACCCTGCACAGTATGAGCCACTTCCACATGCTCAGTGACCCCGAGGCCATGTGTTT  
 ACCTGTGTGAACCAGACGGCGGAGCAGCAGGAGTTGGAGGATGAGCAGCGGAGGCTGTGCGACATCCAGC  
 CCTTCTGCCCGTGTGCGCCTCGTGGCCGAGAGGGGGACCGCTGAAGAAGCTCATTAACTCCCAGAT  
 CAGCCTCCTCATTGGCAAAGGTCTCCATGAGTTTGATTCCCTGCGGGACCCGGAAGTAAACGACTTCCGC  
 ACTAAGATGCGCCAGTTTTGTGAAGAGGCTGCTGCTCACCGCCAGCAGCTGGGCTGGGTGGAATGGCTGC  
 AGTACAGCTTCCCCCTGCAGCTGGAGCCCTCAGCAAGGGGTTGGCGGGCCGGCTTATTGCGTGTGAGCA  
 CCGAGCCCTGCTGGTCAACGTGAAGTTCGAGGGCAGTGAGGAGAGCTTACCTTCCAGGTATCCACCAAG  
 GACATGCCCTGGCACTGATGGCCTGTGCCCTCCGAAAAAGGCCACAGTGTCCGGCAGCCTCTGGTGG  
 AGCAGCCTGAGGAATATGCCCTGCAGGTGAACGGGAGGCAGCAATACCTTACGGCAACTACCCGCTCTG  
 CCACTTTCAGTACATCTGCAGCTGCCTACACAGCGGGCTGACCCCTCATCTGACCATGGTCCACTCCTCC  
 TCCATCCTTGCTATGCGGGATGAGCAGAGCAATCCTGCCCCCAAGTACAGAAACCACAGTGCACAAACCTC  
 CCCCAGTCCCTGCCAAGAAGCCCTCCTCTGTGTCCCTGTGGTCCCTGGAACAGCCATTCTCCATTGAGCT  
 GATCGAGGGCCGAAAAGTGAATGCTGACGAGCGGATGAAGCTGGTTGTTGAGCCGGGCTCTTCCATGGC  
 AATGAGATGCTGTGCAAGACTGTGTCAAGCTCGGAGGTGAATGTATGCTCAGAGCCCGTGTGGAAGCAGC  
 GACTGGAGTTCGATATCAGCGTCTGTGACCTCCCGCGCATGGCTCGACTCTGTTTTGCTCTATGCCGT  
 CGTGGAGAAGGCTAAGAAGGCACGCTCCACAAAGAAGAAGTCTAAGAAGGCGGACTGCCCATCGCTTGG  
 GCCAACCTCATGTATTGACTACAAAGATCAGCTCAAGACGGGGAGCGCTGCCTCTACATGTGGCCCT  
 CTGTCCCAGATGAGAAGGGAGAGCTGCTGAATCCTGCGGGTACAGTGCAGGGGAACCCCAACACGGAGAG  
 TGCCGCTGCCCTGCTCATCTACCTGCTGAGGTGGCCCCCACCCTGTGACTTCCCGCTCTGGAGAAG



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ATCCTGGAGCTGGGGCGTCACGGGGAGCGTGGGCGCATCACGGAGGAGGAGCAGCTGCAGCTGCGGGAGA  
 TCCTGGAACGGCGGGGATCCGGGAACTGTACGAACATGAGAAGGACCTGGTGTGGAAGATGCGCCACGA  
 AGTCCAGGAGCATTTCCAGAGGCGCTGGCCCGCTGCTGCTGGTACCAAGTGAATAAACACGAGGAT  
 GTGGCCAGCTGTCCAGATGCTCTATTTGCTGTGCTCCTGGCCCGAGCTGCCTGTGCTGAGCGCCCTGG  
 AACTTCTGGACTTTAGCTTTCCGACTGCTACGTGGGCTCCTTCGCCATCAAGTCCCTTCGGAAGCTGAC  
 GGACGATGAGCTCTCCAGTACCTTCTGCAGCTGGTGAAGTCTCAAATATGAGTCTACCTGGACTGC  
 GAGCTGACCAAAATCTTGTGGCCGAGCCCTGGCTAACCGCAAGATCGGACACTTCTGTCTGGCACC  
 TCCGCTCTGAGATGCACGTACCATCAGTGGCTCTGCGGTTTGGTCTCATCATGGAAGCCTACTGCAGAGG  
 CAGCACCCACCACATGAAGGTGCTGATGAAGCAGGGGGAAGCACTGAGCAAGCTTAAGGCACTGAATGAC  
 TTTGTGAAGGTGAGTTCCAGAAGACCACCAAGCCCCAAACCAAGGAGATGATGCATATGTGCATGCGCC  
 AGGAGACCTACATGGAGGCCCTGTCCCACCTGCAGTCTCCACTCGACCCAGCACCTGTGGAGGAAGT  
 CTGTGTGGAGCAGTGCACCTTCATGGACTCCAAAATGAAGCCCTGTGGATCATGTACAGCAGCGAGGAG  
 GCGGGCAGTGTGCAACGTGGGCATCATCTTTAAGAACGGGGATGACCTCCGCCAGGACATGCTGACTC  
 TGCAGATGATCCAGCTCATGGACGTCTGTGGAAGCAGGAGGGCCTGGACCTGAGGATGACGCCCTACGG  
 CTGCCCTCCACCGGGGACCGCACAGGTCTCATCGAGGTGGTCTCCACTCGGACACCATGCCAACATC  
 CAGCTGAACAAAAGCAACATGGCGGCCACAGCTGCCTTCAACAAGGACGCCCTGCCTCAACTGGCTCAAGT  
 CCAAGAACCCTGGGGAGGCCCTGGATCGGGCCATTGAGGAATCACCCCTCTCTGTGCTGGCTACTGTGT  
 GGCCACATATGTTCTGGGCATCGGTGACCGGCACAGCACAACATCATGATCAGAGAGAGTGGGAGCTC  
 TTCCACATTGATTTTGGCCACTTTCTGGGGAACCTCAAGACCAAGTTTGGAAATCAACCGAGAGCGCGTCC  
 CCTTCATTCTCACCTACGACTTTGTCCAGTGTCCAGCAGGGGAAGACTAACACAGTGAAGAAGTTTGA  
 AAGTTCCGCGGCTACTGTGAACGAGCCTATACCATCTGCGGCCACGGGCTGCTTTTCTCCATCTC  
 TTCGCCCTGATGCGGGCCGAGGTCTGCCTGAGCTTAGCTGCTCCAAAGATATCCAGTATCTCAAGGACT  
 CTCTGGCACTGGGGAAGACGGAGGAAGAGGCGCTAAAGCACTTCCGGGTGAAGTTCAACGAAGCTCTCCG  
 AGAAAGCTGAAAAACCAAGTCAACTGGCTGGCGACAATGTGTCCAAGGATAACCGACAG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>MG211516 representing NM\_001029837  
 Red=Cloning site Green=Tags(s)

MPPGVDCPMEFWTKESQSVVVDLPTGVYLNFPVSRNANLSTIKQVLWHRAQYEPLFHMLSDPEAYVF  
 TCVNQTAEQELEDQRRLCDIQPFLPVLRLVAREGDRVKKLINSQISLLIGKGLHEFDSLDRPEVNDFR  
 TKMRQFCEEAHRQQLGWVWELQYSFPLQLEPSARGWRAGLLRVSNRALLVNVKFESEESFTFQVSTK  
 DMPLALMACALRKKATVFRQPLVEQPEEYALQVNGRHELYGNYPLCHFQYICSLHSGLTPHLTMVHSS  
 SILAMRDEQSNPAPQVQKPRAKPPPAPAKKSSVSLWSLEQPFSEIELIEGRKVNADERMMLVQAGLFHG  
 NEMLCKTVSSSEVNVCSPEVWQRLFEFDSVCDLPRMARLFCALYAVVEKAKKARSTKSKKADCPICAW  
 ANLMLFDYKDLKGTGERCLYMWPSVPDEKGELLNPAGTVRGNPNTEAALVIYLPVAPHPVYFPALEK  
 ILELGRHGERGRITEEELQLREILERRGSGELYEHEKDLVWKMREVEHFPEALARLLLVTKWNKHED  
 VAQLSQMLYLLCSWPELPVLSALELLDFSPDCYVGSFAIKSLRKLTDDELQYLLQLVQVLKYESYLDL  
 ELTKFLLGRALANRKIGHFLFWHLRSEMHVPSVALRFGLIMEAYCRGSTHMKVLMKQGEALSKLKALND  
 FVKVSSQKTTKPKQTKEMMHCMRQETMEALSHLQSPDPSTLLEEVCVEQCTFMDSKMKPLWIMYSSEE  
 AGSAGNVGIIIFKNGDDLQDMLTLQMIQLMDVLWQEGLDLDMPTPYGCLPTGDRGLIEVVLHSDTIANI  
 QLNKSNMAATAAFNKDALLNLKSNPGEALDRAIEEFTLSCAGYCVATYVLGIGDRHSDNIMIRESGQL  
 FHIDFGHFLGNFKTKFGINRERVPFILTYDFVHVIQGGKTNNSEKFERFRGYCERAYTILRRHGLLFLHL  
 FALMRAAGLPELSCSKDIQYLKDSLALGKTEEEALKHFRVVKFNEALRESWTKVNWLAHNVSKDNRQ

TRTRPLE – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI



<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001029837.2</a></u> , <u><a href="#">NP_001025008.2</a></u>
<b>RefSeq Size:</b>	4853 bp
<b>RefSeq ORF:</b>	3144 bp
<b>Locus ID:</b>	18707
<b>Cytogenetics:</b>	4 E2
<b>Gene Summary:</b>	<p>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]</p>