

## Product datasheet for **MG215684**

### Pik3c2a (NM\_011083) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Pik3c2a (NM_011083) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pik3c2a
Synonyms:	Cpk-m; PI3KC2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG215684 representing NM_011083 Red=Cloning site Blue=ORF Green=Tags(s)

GACGTTGTATACGACTCCTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GGCGGCC**

ATGGCTCAGATTTCCAACAACAGTGAATTTAAACAATGTTTCATCTTCACATCCAGAACCAATAAGAACCA  
AAGATGTGAACAAAGCAGAAGCGTTACAGATGGAAGCAGAAGCCTTAGCAAACTGCAGAAGGATAGACA  
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CACGAACATATTCAAATTTGTCGAAAATGGGACACAGAGATTAATTTACAGCTCTTGACCTTGAGTGCAA  
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CTTGGGTGGAATAACCTGCCACTGAAAGATTTCAACTTGAAGGAGAGACAGTTAAGTGGTATCAGCTG  
ACTGCGGCAACGTATCTA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG215684 representing NM\_011083  
 Red=Cloning site Green=Tags(s)

MAQISNNSEFKQCSSSHPEPIRTKDVNKAELQMEAEALAKLQKDRQMTDSPRGFELSSSTRQRTQGFNK  
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 QWPPGLCGPSTYTL PSTYPSAYSQKATFQNGFSRPMPTFPSTESVYLRLPGQSPYF SYLTPATPFHPQG  
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 QGQVSKDPNGTSSLPTGSSLLQEFVQNDVAFAFQCSIMKLT KFPYTDHCTNPGYLLSPVTVQRNMG  
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 VSNYEKYLLICSLSHNGKDLFKPIQSKKVGTYKNFFYL IKWDEL IIFPIQISQLPLESVLHLLTFGLVNLQ  
 SSGSSPDSNKQRKGPEALGKVSLL FDFKRFLTCGTKLLYLWTSSTNSIPGAIPKKS YMERIVLQVDF  
 PSPAFDIIY TSPQIDRNI IQQDKLETLESDIKGKLLDI IHRDSSFGLSKEDKVFLWENRYCLKHPNCLP  
 KILASAPNWKWANLAKTYSLLHQWPPLCP LALELLDAKFADQEVRS LAVSWMEATSDDELADLLPQFVQ  
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 TGHMFHIDFGKFLGHAQMF GSKFRDRAPFVLTSDMAYVINGGEKPTIRFQLFVDLCCQAYNLIRKQTNLF  
 LNL LSLMIPSGLPELTSIQDLKYVRDALQPQTDAEATIFFTRL IESSLGSIA TKFNFFIHNLAQLRFSG  
 LPSNDEPILSFSPKTYSFRQDGRIKEVS VFTYHKKNPDKHYIYVVRILREGHLEPSFVFRTFDEFQELH  
 NKL SIIIFPLWKLPGFPNRMVLRGTHIKDVAARKIELNSYLQSLMNASTDVAECDLVCTFFHPLLRDEKA  
 EGIARSAGAVPFSPTLGGI GAVKLSVSYRNGTLFIMVMHIKDLVTEGDADPNPYVKTYLLPDTHKTSKR  
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 TAATYL

TRTRPLE – GFP Tag – V

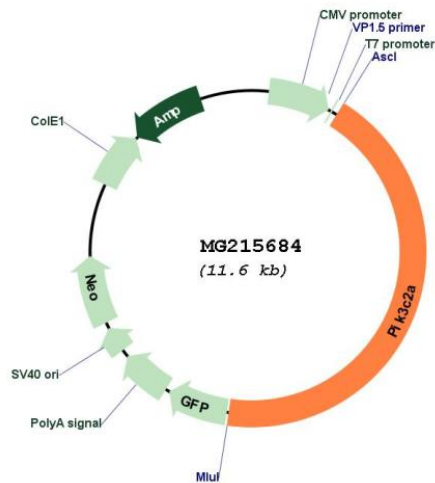
Restriction Sites:

AscI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_011083

ORF Size: 5058 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: 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_011083.2</a></u> , <u><a href="#">NP_035213.2</a></u>
<b>RefSeq Size:</b>	8042 bp
<b>RefSeq ORF:</b>	5061 bp
<b>Locus ID:</b>	18704
<b>UniProt ID:</b>	<u><a href="#">Q61194</a></u>
<b>Cytogenetics:</b>	7 61.62 cM
<b>Gene Summary:</b>	Generates phosphatidylinositol 3-phosphate (PtdIns3P) and phosphatidylinositol 3,4-bisphosphate (PtdIns(3,4)P2) that act as second messengers. Has a role in several intracellular trafficking events. Functions in insulin signaling and secretion. Required for translocation of the glucose transporter SLC2A4/GLUT4 to the plasma membrane and glucose uptake in response to insulin-mediated RHOQ activation. Regulates insulin secretion through two different mechanisms: involved in glucose-induced insulin secretion downstream of insulin receptor in a pathway that involves AKT1 activation and TBC1D4/AS160 phosphorylation, and participates in the late step of insulin granule exocytosis probably in insulin granule fusion. Synthesizes PtdIns3P in response to insulin signaling. Functions in clathrin-coated endocytic vesicle formation and distribution. Regulates dynamin-independent endocytosis, probably by recruiting EEA1 to internalizing vesicles. In neurosecretory cells synthesizes PtdIns3P on large dense core vesicles. Participates in calcium induced contraction of vascular smooth muscle by regulating myosin light chain (MLC) phosphorylation through a mechanism involving Rho kinase-dependent phosphorylation of the MLCP-regulatory subunit MYPT1. May play a role in the EGF signaling cascade. May be involved in mitosis and UV-induced damage response. Required for maintenance of normal renal structure and function by supporting normal podocyte function.[UniProtKB/Swiss-Prot Function]