

## Product datasheet for **RG226818**

### **PIK3R5 (NM\_001142633) Human Tagged ORF Clone**

#### **Product data:**

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                          |
| Product Name:             | PIK3R5 (NM_001142633) Human Tagged ORF Clone |
| Tag:                      | TurboGFP                                     |
| Symbol:                   | PIK3R5                                       |
| Synonyms:                 | F730038I15Rik; FOAP-2; p101; P101-PI3K       |
| Mammalian Cell Selection: | Neomycin                                     |
| Vector:                   | pCMV6-AC-GFP (PS100010)                      |
| E. coli Selection:        | Ampicillin (100 ug/mL)                       |



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**ORF Nucleotide Sequence:**

>RG226818 representing NM\_001142633  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCAGCCAGGGCCACGACATGCACGGAGGACCGCATCCAGCATGCCCTGGAACGCTGCCTGCATGGAC  
 TCAGCCTCAGCCCGCTCCACCTCCTGGTCAGCTGGGCTGTGTCTGAACTGCTGGAGCCTGCAGGAGCT  
 GGTGAGCAGGGACCCGGGCCACTTCCTTATCCTCCTTGAGCAGATCCTGCAGAAGACCCGAGAGGTCAG  
 GAGAAGGGCACCTACGACCTGCTCACCCGCTGGCCCTGCTCTTCTATTCCACTGTTCTTTGTACACCAC  
 ACTTCCCACCAGACTCGGATCTCCTTCTGAAGGCAGCCAGCACCTACCACCGTTCTGACCTGGCCTGT  
 TCCTTACTGCAGCATCTGCCAGGAGCTGCTCACCTTCATTGATGCTGAACTCAAGCCCCAGGGATCTCC  
 TACCAGAGACTGGTGAGGGCTGAGCAGGGCCTGCCATCAGGAGTCACCGCAGCTCCACCGTCACCGTGC  
 TGCTGCTGAACCCAGTGAAGTGCAGGCCGAGTTCCTTGCTGTAGCCAATAAGCTGAGTACGCCGGACA  
 CTCGCCTCACAGTGCCTACACCACCTGCTCCTGCACGCCTTCCAGGCCACCTTTGGGGCCCACTGTGAC  
 GTCCCGGGCCTGCACTGCAGGCTACAGGCCAAGACCCTGGCAGAGCTTGAGGACATCTTACGGAGACCG  
 CAGAGGCACAGGAGCTGGCATCTGGCATCGGGATGCTGCAGAGGCCCGCGGTGGCTCAGGACCAAGCT  
 GCAGGCGGTGGGAGAAAAGCTGGCTTCCCTGGGGTGTAGACACTGCAAAACCAGGGAAGCTCCACACC  
 ATCCCCATCCCTGTCGCCAGGTGCTACACCTACAGCTGGAGCCAGGACAGCTTTGACATCCTGCAGGAAA  
 TCCTGCTCAAGGAACAGGAGCTACTCCAGCCAGGGATCCTGGGAGATGATGAAGAGGAGGAAGAGGAGGA  
 GGAGGAGTGGAGGAGGACTTGGAACTGACGGGCACTGTGCCGAGAGAGATTCCCTGCTCTCCACCAGC  
 TCTTTGGCGTCCCATGACTCCACCTTGCCCTTGATCCTCCAGGCCTCGGGCCCGCCCTCTCGCGCC  
 ATCTGCTGACTTCTTTGTCTCAGGCCCTCTGATGGCATGGACAGCGGCTACGTGGAGGACAGCGAGGA  
 GAGCTCCTCCGAGTGGCCTTGGAGGCGTGGCAGCCAGGAACGCCGAGGCCACCGCAGGCCTGGGCGAAG  
 TTCATCAGGATCTATAAACTCTTCAAGAGCACCCAGCCAGCTGGTACTGCGGAGGGACTCTCGGAGCCTGG  
 AGGGCAGCTCGGACACGGCCCTGCCCTGAGGCGGGCAGGGAGCCTCTGCAGCCCCTGGACGAACCAGT  
 ATCACCCCTTCCCGGGCCAGCGCTCCCGCTCCCTGCCCCAGCCAACTCGGTACCCAGCTGCCCAGC  
 TGGCTTCTGGCCCTGCTTACGCCCCAGCGCCCGCCCTTCTGAGTGGAGATGAGGATCCCAAGG  
 CTTCACGCTACGTGTTGTGGTCTTTGGCTCCGATCGGATTTAGGGAAGGTGGCTCGGGCTACAGCAA  
 CCTTCGGCGGCTGGAGAACAATCGCCACTCCTCACACGGTCTTCAAACCTCAGTCTTCTACGTGCCT  
 GTGAAGCGAAGTCATGGGACCAGCCCTGGTGCCTGTCCACCCCTCGGAGCCAGACGCCCTCACCCCGA  
 CAGACTCCCTAGGCACGCCAGCCCTGGAGAGCTGGGCACCACCCATGGGAGGAGAGCACAATGACAT  
 CTCCCCTACCTCGGCATGCTGGACCCCTGGTATGAGCGCAATGTACTGGGCCTCATGCACCTGCCCCCT  
 GAAGTCTGTGCCAGCAGTCCCTGAAGGCTGAAGCCAGGCCCTGGAGGGCTCCCAACCAGCTGCCCA  
 TCCTGGCTGACATGCTACTCTACTGCGCTTTGCCCGCAGACCGGTGCTGCTGCAAGTCTATCAGAC  
 CGAGCTGACCTTCATCACTGGGAGAAGACGACAGAGATCTTATCCACTCCTTGGAGCTGGTCACTCC  
 GCTGCCACAGTGCCATCAAGGCGTCAGGTCTGGCAGCAAGCGGCTGGGCATCGATGGCGACCGGGAGG  
 CTGTTCTTAACACTACAGATTATTTACAGCAAGGGGGCCATCAGTGGACGAAGTCGCTGGAGCAAACCT  
 GGAGAAGGTCTGTACCTCCGTGAACCTCAACAAGGCCTGCCGGAAGCAGGAGGAGCTGGATTCCAGCATG  
 GAGGCCCTGACGCTAAACCTGACAGAAGTGGTGAAGGCAAGCAACTCCAATCCAAGAAGGGCTTTAACCC  
 AGATTAGCACATCGCAGATCAAAGTGGACAAGGTGCAGATCATCGGCTCCAACAGCTGCCCTTTGCTGT  
 GTGCCTGGACCAGGATGAGAGAAAGATCCTGCAGAGTGTAGTCAGATGTGAGGTCTCACCGTGTACAAG  
 CCAGAGAAGAGCGACCTCTCCTCACACCCAGACGCCTCCTGACCTGCCGGCCAGGCCGACCTGATC  
 TCTGCTCCCTTCTGCTGCCATCATGACTTTCAGTGGAGCTCTGCC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG226818 representing NM\_001142633  
 Red=Cloning site Green=Tags(s)

MQPGATTCTEDRIQHALLERCLHGLSLRRSTSWAGLCLNCWSLQELVSRDPGHFLILLEQILQKTREVG  
 EKGYDLLTPLALLFYSTVLCPTHFPDSDLLKAASYHRFLTWPVVPYCSICQELLTFIDAELKAPGIS  
 YQRLVRAEQGLPIRSHRSSTVTVLLLNPFVEVQAEFLAVANKLSTPGHSPHSAYTTLLHAFQATFGAHC  
 VPGLHCRQLAKTLAELEDIFTETAEAQELASGIGDAAEARWLRKLAQVGEKAGFPGLVDTAKPGKLT  
 IPIPVARYCYTYSWQSFQDILQEILLKEQELLQPGILGDDEEEEEEEVEEDLETDGHCAERDLSLSTS  
 SLASHDSTLSLASSQASGPALSRHLLTSFVSGLSGMDSGYVEDSEESSEWPPWRRGSQERRGHRPQK  
 FIRIYKLFKSTSQLVLRDRSRLEGSSDTALPLRRAGSLCSPLDEPVSPPSRAQRSLPQPKLGTQLPS  
 WLLAPASRPQRRPFLSGDEDPKASTLRVVVFGSDRISGKVARAYSNLRRLENNRPLLTRFFKLQFFYVP  
 VKRSHGTPGACPPPRSQTSPPTDSPRHASPGELGTTPEESTNDISHYLGMLDPWYERNVGLMHLPP  
 EVLQQSLKAEQALEGSPTQLPILADMLLYCRFAARPVLLQVYQTELTFTITGEKTEIFIHSLLELGH  
 AATRAIKASGPGSKRLGIDGDREAVPLTLQIIYSKGAISGRSRWSNLEKVTSVNLNKACRQKQEELSSM  
 EALTLNLTEVVKRQNSKSKKGFNQISTSQIKVDKQVIIGSNPCFVAVCLDQDERKILQSVVRCEVSPCYK  
 PEKSDLSSPPQTPPDLPQAAPDLCSLLCLPIMTFSGALP

TRTRPLE - GFP Tag - V

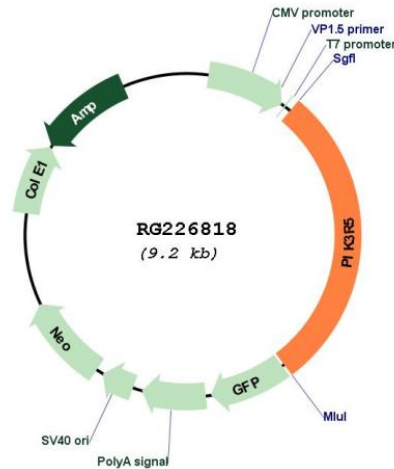
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



## Plasmid Map:



ACCN: NM\_001142633

ORF Size: 2640 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in *E. coli* are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

**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\\_001142633.2](#), [NP\\_001136105.1](#)

|                   |   |
|-------------------|---|
| RefSeq Size:      | 4507 bp   |
| RefSeq ORF:       | 2643 bp   |
| Locus ID:         | 23533   |
| UniProt ID:       | <a href="#">Q8WYR1</a>  |
| Cytogenetics:     | 17p13.1   |
| Protein Families: | Druggable Genome  |
| Protein Pathways: | Acute myeloid leukemia, Apoptosis, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Glioma, Insulin signaling pathway, Jak-STAT signaling pathway, Leukocyte transendothelial migration, Melanoma, mTOR signaling pathway, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Phosphatidylinositol signaling system, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, Small cell lung cancer, T cell receptor signaling pathway, Toll-like receptor signaling pathway, Type II diabetes mellitus, VEGF signaling pathway |
| Gene Summary:     | Phosphatidylinositol 3-kinases (PI3Ks) phosphorylate the inositol ring of phosphatidylinositol at the 3-prime position, and play important roles in cell growth, proliferation, differentiation, motility, survival and intracellular trafficking. The PI3Ks are divided into three classes: I, II and III, and only the class I PI3Ks are involved in oncogenesis. This gene encodes the 101 kD regulatory subunit of the class I PI3K gamma complex, which is a dimeric enzyme, consisting of a 110 kD catalytic subunit gamma and a regulatory subunit of either 55, 87 or 101 kD. This protein recruits the catalytic subunit from the cytosol to the plasma membrane through high-affinity interaction with G-beta-gamma proteins. Multiple alternatively spliced transcript variants encoding two distinct isoforms have been found. [provided by RefSeq, Oct 2011]       |