

## Product datasheet for **RG206010**

### ULK2 (NM\_014683) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ULK2 (NM_014683) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ULK2
Synonyms:	ATG1B; Unc51.2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG206010 representing NM_014683 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGGTGGTGGTGACTTCGAGTACAGCAAGAGGGATCTCGTGGGACACGGGGCCTTCGCCGTGGTCT  
TCCGGGGCGGCACCGCCAGAAAAGTATTGGGAGGTAGCTATTAAGTATTAATAAAAAGAAGCTTGTG  
AAAATCACAATACTGCTTGGAAAGGAAATTAATCTTAAAGGAAGTTCAGCATGAAAATATTGTAGCA  
CTCTATGATGTTAGGAATTACCAACTCTGTCTTTTGGTGATGGAGTATTGCAATGGTGGAGACTCG  
CAGATTATTTGCAAGCGAAAGGGACTCTCAGTGAAGACACGATCAGAGTGTTCATGATCAGATTGCTGC  
TGCCATGCGAATCCTGCACAGCAAAGGAATCATCCACAGAGATCTCAAACACAGAACATCTTGCTGTCC  
TATGCCAATCGCAGAAAATCAAGTGTGAGTATTTCGATCAAAAATAGCGGATTTTGGTTTTGCTCGTT  
ACCTACATAGTAACATGATGGCTGCAACTGTGTGGATCCCGATGTACATGGCTCCTGAGGTTATTAT  
GTCTCAACATTATGATGCTAAGGCTGACTTGTGGAGCATAGGAACAGTATATACCAATGCCTAGTTGGA  
AAACCACCTTTTCAGGCCAATAGTCTCAAGACTTAAGGATGTTTTATGAAAAAACAGGAGCTTAATGC  
CTAGTATCCAGAGAAACATCACCTTATTTGGCTAATCTCCTTTTGGTTTGTTCAGAGAAAACAAAA  
AGATAGAATGGACTTTGAAGCGTTTTTAGCCATCCTTTCTTGAGCAAGTCCAGTAAAAAATCTTGC  
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TTGCTTCCACCATCCCTCCAGATATGCAGCATATTCAGGAAGAAAAGTATCTTCCCCACCATGGG  
TCTCCCAACTATCTACAAGTTTCAAAGATTCTGCCAGTACTAGTAGCAAGAACTCTTCTGTGACACG  
GATGACTTTGTTTTGGTCCACACAACATCTCGTCAGACCACTCATGTGATATGCCAATGGGGACTGCTG  
GCAGACGTGCTTCAAATGAATCTTGGTGTGTGGAGGCGAGTGTGAGCCTACTGTGTACCTCACAGCGA  
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GCCAGCTCAGGCACAAAATGACATGGTTCTCAAGATCTGCAGTGGTACGAAGGTCCAACACCAGCCCCA  
TGGGCTTCTCCGGCCGGGATCATGCTCCCGAGTACCAGCAGACACAGCAGACAGTGGACGAAGGCT  
CTCCACTGGGTCTCTAGGCCTTACTCACCTTCCCTTTGGTTGGTACCATTCTGAGCAATTCAGTCAG



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TGCTGCTGTGGGCATCCTCAGGGCCATGACTCCAGGAGTAGAACTCCTCAGGTTCTCCAGTGCCACAAG  
 CTCAGTCCCCACAGTCTCTTATCGGGTGTAGACTGCAGAGCGCCCCACCCTCACTGACATCTATCA  
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 ATGTTTCAGCAGACCGAAGATATTGTTTATCGCTATCATAAGGCAGCCCTCTTTTGAAGGCCTAAGTA  
 GGATTCTACAGGACCCTGCAGATATTGAAAATGTGCATAAATAAATGTAGTATTGAGAGAAGACTGTC  
 GCGCTCTGCCATAGCACCGCAACCGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG206010 representing NM\_014683  
 Red=Cloning site Green=Tags(s)

MEVVDFEYSKRDVLVGHGAFVVFGRHRQKTDWEVAIKSINKKNLSKSQILLGKEIKILKELQHENIVA  
 LYDVQELPNSVFLVMEYCNNGDLADYLQAKGTLSEDTIRVFLHQIAAAMRILHSGKGIHRDLKPNILL  
 YANRRKSSVSGIRIKIADFGFARYLHNSMMAATLCGSPMYMAPEVIMSQHYDAKADLWSIGTVIYQCLVG  
 KPPFQANSPODLRMFYEKNRSLMPSIPRETSPYLANLLLGLLQRNQKDRMDFEAFFSHPFLEQGPVKKSC  
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 YSPQPSRPGSLGTSPTKHLGSSPRSSDWFKTPPTIIGSPTKTTAPFKIPKTQASSNLLALVTRHGPAE  
 EQSKDGNPRECAHCLLVQGSERQRAEQSKAVFGRSVSTGKLSQQGKTPICRHQGSTDSLNTERPMDI  
 APAGACGGVLAPPAGTAASSKAVLFTVGSPPHSAAPTCTHMLRTRTTSVGPNSGGSLCAMSGRVCVG  
 SPPGPGFGSSPPGAEAPSLRYVPYVYASPPSLEGLITFEAPELPEETLMEREHTDLRHLNVMLMFTCV  
 LDLTAMRGGNPELCTSAVSLYQIQESVVDQISQLSKDWGRVEQLVLYMKAQQLAASLHLAKAQIKSGK  
 LSPSTAVKQVVKNLNERYKFCITMCKKLTAKLNRFSDKQRFIDEINSVTAEKLIYNCAVEMVQSAALDE  
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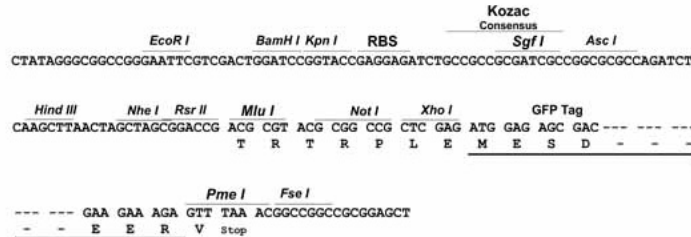
TRTRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM\_014683

ORF Size: 3108 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\\_014683.2](#), [NP\\_055498.2](#)

**RefSeq Size:** 5807 bp

**RefSeq ORF:** 3111 bp

**Locus ID:** 9706

**UniProt ID:** [Q8IYT8](#)

**Cytogenetics:** 17p11.2

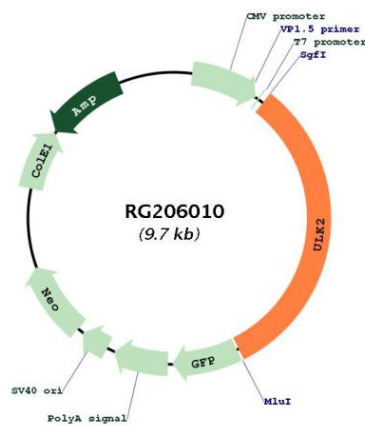
**Domains:** kinase, TyrKc, S\_TKc

**Protein Families:** Druggable Genome, Protein Kinase

**Protein Pathways:** mTOR signaling pathway, Regulation of autophagy

**Gene Summary:** This gene encodes a protein that is similar to a serine/threonine kinase in *C. elegans* which is involved in axonal elongation. The structure of this protein is similar to the *C. elegans* protein in that both proteins have an N-terminal kinase domain, a central proline/serine rich (PS) domain, and a C-terminal (C) domain. The gene is located within the Smith-Magenis syndrome region on chromosome 17. Alternatively spliced transcript variants encoding the same protein have been identified. [provided by RefSeq, Dec 2008]

### Product images:



Circular map for RG206010