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Product datasheet for RG215643

ULK1 (NM_003565) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ULK1 (NM_003565) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ULK1
Synonyms:	ATG1; ATG1A; hATG1; UNC51; Unc51.1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG215643 representing NM_003565
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGCCCGGCCGCGGCGGCACAGAGACCGTGGGCAAGTTCGAGTTCTCCCGCAAGGACCTGATCGGCC
ACGGCGCCTTCGCGGTGGTCTTCAAGGGCCGCCACCGCGAGAAGCACGATTTGGAGGTCGCCGTCAAGTG
CATTAACAAGAAGAACCTCGCCAAGTCTCAGACGCTGCTGGGGAAGGAAATCAAAATCCTGAAGGAACTG
AAACATGAAAACATCGTGGCCCTGTACGACTTCCAGGAAATGGCTAATTCTGTCTACCTGGTTATGGAGT
ACTGCAACGGTGGGGACCTGGCCGACTACCTGCACGCCATGCGCACGCTGAGCGAGGACACCATCAGGCT
CTTCCTGCAGCAGATCGCGGGCGCCATGCGGCTTCTGCACAGCAAAGGCATCATCCACCGCGACCTGAAA
CCGCAGAACATCCTGCTGTCCAACCCCGCCGGCCGCCGCGCCAACCCCAACAGCATCCGCGTCAAGATCG
CTGACTTCGGCTTCGCGCGGTACCTCCAGAGCAACATGATGGCGGCCACACTCTGCGGCTCCCCCATGTA
CATGGCCCCCGAGGTCATCATGTCCCAGCACTACGACGGGAAGGCGGACCTGTGGAGCATCGGCACCATC
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CCTACTGCAACGCAACCACAAGGACCGCATGGACTTCGATGAGTTTTTTCATCACCCTTTCCTCGATGCC
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CCTGGCCTCCCCGGCTGACACCGCTGGCTTCCTGCACAGCTCCCGGGACTCTGGTGGCAGCAAGGACTCT
TCCTGTGACACAGACGACTTCGTCATGGTCCCCGCGCAGTTTCCAGGTGACCTGGTGGCTGAGGCGCCCA
GTGCCAAACCCCCGCCAGACAGCCTGATGTGCAGTGGGAGCTCACTGGTGGCCTCTGCGGGCTTGGAGAG
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CACCAGCCCCCTGGGCTTTGCAAGGGCCAGCCCCTCGCCCCCTGCCCACGCTGAGCATGGAGGCGTCCTG

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GCCAGGAAGATGTCTCTGGGTGGAGGCCGGCCCTACACGCCATCTCCTCAAGTTGGAACCATCCCTGAGC
GGCCAGGCTGGAGCGGGACGCCCTCCCCACAGGGAGCTGAGATGCGGGGTGGCAGGTCCCCTCGTCCAGG
CTCCTCTGCACCCGAGCACTCTCCCCGCACTTCCGGGCTGGGCTGCCGCCTGCACAGCGCCCCCAACCTG
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TCCTCCGGCCTGCAAAGTGCCATCGACCAGATCCGGGCCGGCAAGCTCTGCCTGTCGTCCACTGTGAAGC
AGGTGGTGCGCAGGCTGAATGAGCTGTACAAGGCCAGCGTGGTGTCCTGCCAGGGCCTGAGCCTGCGGCT
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TTCAGCCACGCTGTGCAGATGGTGCAGTCGGCTGCCCTGGACGAGATGTTCCAGCACCGTGAGGGCTGCG
TCCCACGCTACCACAAGGCCCTGCTGCTCCTGGAGGGGCTGCAGCACATGCTCTCGGACCAGGCCGACAT
CGAGAACGTCACCAAGTGCAAGCTGTGCATTGAGCGGAGACTCTCGGCGCTGCTGACTGGCATCTGTGCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG215643 representing NM_003565
Red=Cloning site Green=Tags(s)

MEPGRGGTETVGKFEFSRKDLIGHGAFAVVFKGRHREKHDLEVAVKCINKKNLAKSQTLLGKEIKILKEL
KHENIVALYDFQEMANSVYLVMEYCNGGDLADYLHAMRTLSEDTIRLFLQQIAGAMRLLHSKGIIHRDLK
PQNILLSNPAGRRANPNSIRVKIADFGFARYLQSNMMAATLCGSPMYMAPEVIMSQHYDGKADLWSIGTI
VYQCLTGKAPFQASSPQDLRLFYEKNKTLVPTIPRETSAPLRQLLLALLQRNHKDRMDFDEFFHHPFLDA
SPSVRKSPPVPVPSYPSSGSGSSSSSSSTSHLASPPSLGEMQQLQKTLASPADTAGFLHSSRDSGGSKDS
SCDTDDFVMVPAQFPGDLVAEAPSAKPPPDSLMCSGSSLVASAGLESHGRTPSPSPPCSSSPSPSGRAGP
FSSSRCGASVPIPVPTQVQNYQRIERNLQSPTQFQTPRSSAIRRSGSTSPLGFARASPSPPAHAEHGGVL
ARKMSLGGGRPYTPSPQVGTIPERPGWSGTPSPQGAEMRGGRSPRPGSSAPEHSPRTSGLGCRLHSAPNL
SDLHVVRPKLPKPPTDPLGAVFSPPQASPPQPSHGLQSCRNLRGSPKLPDFLQRNPLPPILGSPTKAVPS
FDFPKTPSSQNLLALLARQGVVMTPPRNRTLPDLSEVGPFHGQPLGPGLRPGEDPKGPFGRSFSTSRLTD
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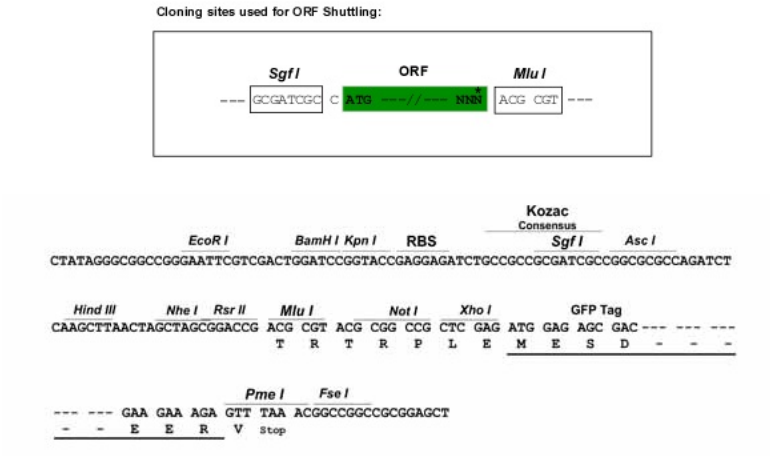
TRMFSAGPTGSASSSARHLVPGPCSEAPAPELPAPGHGCSFADPITANLEGAVTFEAPDLPEETLMEQEH
TEILRGLRFTLLFVQHVLEIAALKGSASEAAGGPEYQLQESVVADQISLLSREWGFAEQLVLYLKVAELL
SSGLQSAIDQIRAGKLCLSSTVKQVVRRLNELYKASVVSCQGLSLRLQRFFLDKQRLLDRIHSITAERLI
FSHAVQMVQSAALDEMFQHREGCVPRYHKALLLLEGLQHMLSDQADIENVTKCKLCIERRLSALLTGICA

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003565

ORF Size: 3150 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 or by calling 301.340.3188 option 3 for pricing and delivery.

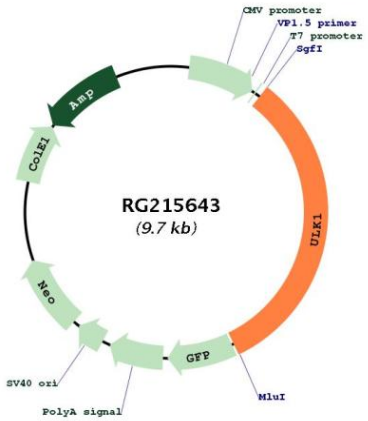
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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_003565.4
RefSeq Size:	5228 bp
RefSeq ORF:	3153 bp
Locus ID:	8408
UniProt ID:	O75385
Cytogenetics:	12q24.33
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	mTOR signaling pathway, Regulation of autophagy
Gene Summary:	Serine/threonine-protein kinase involved in autophagy in response to starvation. Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes. Part of regulatory feedback loops in autophagy: acts both as a downstream effector and negative regulator of mammalian target of rapamycin complex 1 (mTORC1) via interaction with RPTOR. Activated via phosphorylation by AMPK and also acts as a regulator of AMPK by mediating phosphorylation of AMPK subunits PRKAA1, PRKAB2 and PRKAG1, leading to negatively regulate AMPK activity. May phosphorylate ATG13/KIAA0652 and RPTOR; however such data need additional evidences. Plays a role early in neuronal differentiation and is required for granule cell axon formation. May also phosphorylate SESN2 and SQSTM1 to regulate autophagy (PubMed:25040165). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG215643