

## Product datasheet for **MC223082**

### Ulk2 (BC053029) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ulk2 (BC053029) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ulk2
Synonyms:	Unc51.2, mKIAA0623
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>BC053029 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGGTGGTGGGCGACTTCGAGTACTGCAAGCGGGACCTCGTGGGACACGGGGCCTTCGCTGTGGTCT  
TCCGGGGCGGCACCGCCAGAAAAGTATTGGGAGGTGGCTATTAAGTATTAATAAAAAAGAACTTGTC  
AAAATCACAAATCTGCTTGGAAAGGAAATAAAAATCTTAAAGGAGCTTCAGCATGAAAACATCGTAGCG  
CTCTATGATGTTCAAGGAATTGCCAACTCTGTCTTCTGGTGATGGAGTATTGCAATGGTGGAGACTGG  
CAGATTATTTGCAAGCTAAAGGAACTCTGAGTGAAGATACTATCAGAGTGTTCATCAGATTGCGGC  
AGCCATGCGAATCCTGCACAGCAAAGGGATAATCCACAGGGATCTCAAACACAGAATATCCTGTTGTCT  
TATGCCAATCGAAGGAAGTCAATGTCAGTGGTATTCGATTAATAAGTATGCTGATTTGGTTTCGCACGGT  
ACCTACATAGTAACACAATGGCAGCGACACTGTGTGGATCCCAATGTACATGGCTCCCGAGGTTATTAT  
GTCTCAACATTATGATGCTAAGGCAGATTTATGGAGCATAGGAACAGTGTCTATCAATGCCTAGTTGGA  
AAACCACCTTTTCAGGCTAATAGTCTCAGGACCTAAGGATGTTTTATGAAAAAACAGGAGCTTAATGC  
CTAGTATTTCCAGAGAAACATCACCTTACTTGGCTAATCTCCTTTTGGGTTTGGCTTCAGAGAAATCAAAA  
GGATAGAATGGACTTTGAAGCATTTCAGCCATCCTTTCTGAGCAAGTCCAGTTAAAAAATCTTGC  
CCAGTCCCAAGTGCCTGTGTATTCTGGCCCTGTCCCTGGAAGCTCCTGCAGCAGCTCACCATCTTGTGCT  
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CCAGACGTGCTTCAAATGAATCTTTATGTGTGGAGGGCAGTGTCAACCTACTGTGCACCTCACAGCGA  
AACAGCCCCAATCCAGTTCCTACTCAAGTAAGGAATTATCAGCGCATAGAACAGAATCTTATATCCACT  
GCCAGCTCTGGCACAACCCACATGGTTCTCAAGATCTGCAGTAGTACGAAGGTCTAATACCAGCCCCA  
TGGGCTTCTCCGGGTTGGGTCCTGCTCCCTGTACCAGGAGACACAGTGCAGACAGGAGGACGAAGACT  
CTACTGGCTCTTCCAGGCCTTACTCACCATCCCTTTGGTTGGTACCATTCTGAACAGTTTGTAGTCAG  
TGCTGCTGTGGACATCCTCAGGGCCATGAAGCCAGGAGTAGGCACTCCTCAGTTCTCCAGTGCCACAGA



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CCCAGGCACCACAGTCACTCTTACTGGGTGCTAGACTGCAGAGTGCACCCACCCTCACCGATATCTATCA
GAACAAGCAGAAGCTCAGAAAGCAGCACTCTGACCCTGTGTGCCGTCCCATGCTGGAGCTGGGTATAGT
TACTCACCTCAGCCTAGTCGGCCTGGCAGCCTTGGGACCTCTCCACCAAGCACACGGGGTCTCTCCAC
GGAATTCTGACTGGTTCTTTAAACTCCTTTACCAACAATCATTGGCTCTCTACTAAGACTACAGCTCC
TTTCAAATCCCTAAAACACAAGCATCTTCAACCTGTTAGCCTTGGTACTCGTCATGGCCTGCTGAA
AGCCAGTCCAAAGATGGGAATGACCCTCGTGAGTGTTCCTCCACTGCCTCTCAGTACAAGGAAGCGAGAGGC
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TCCTCTTACCCTGGGGTCTCTCCACACAGTCCACAGCCCCACTTGTACTCATATGGTCTTCCGAAC
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TGCCTTATGGTGTTCACCACCCAGCCTAGAGGGTCTCATCACCTTTGAGCCCCGAACTACCAGAGGA
GACTGATGGAGCGAGAGCACACAGACACCTTACGCCATCTGAACATGATGTTAATGTTTACTGAGTGT
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CAACAGTGTGACTGCAGAGAACTCATCTATAATTGTGCTGTGGAATGGTTCAATCTGCAGCCCTGGAT
GAGATGTTTCAGCAGACTGAAGACATCGTTTATCGCTACCACAAGGCAGCCCTTCTTTTGGAAAGGCTTAA
GTAAGATCCTGCAGGACCCTACAGATGTTGAAAATGTGCATAAGTATAAATGTAGTATTGAAAGAAGATT
GTCAGCACTCTGCTGTAGCACTGCAACTGTGTGA
    
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** BC053029
- Insert Size:** 3114 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- 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:** [BC053029](#), [AAH53029](#)
- RefSeq Size:** 4413 bp
- RefSeq ORF:** 3113 bp

**Locus ID:** 29869

**Cytogenetics:** 11 B2

**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 a negative regulator of mammalian target of rapamycin complex 1 (mTORC1) via interaction with RPTOR. Activated via phosphorylation by AMPK, also acts as a negative regulator of AMPK through phosphorylation of the AMPK subunits PRKAA1, PRKAB2 and PRKAG1. May phosphorylate ATG13/KIAA0652, FRS2, FRS3 and RPTOR; however such data need additional evidences. Not involved in ammonia-induced autophagy or in autophagic response of cerebellar granule neurons (CGN) to low potassium concentration. Plays a role early in neuronal differentiation and is required for granule cell axon formation: may govern axon formation via Ras-like GTPase signaling and through regulation of the Rab5-mediated endocytic pathways within developing axons.[UniProtKB/Swiss-Prot Function]