

## Product datasheet for **RC231406**

### Cullin 2 (CUL2) (NM\_001198778) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cullin 2 (CUL2) (NM_001198778) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cullin 2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC231406 representing NM\_001198778  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTACAGAGTAACATGGTCAACTTTTTGGCTTAGATTTCAACACTACACTTGCACAATGTCTTTGAAAC  
 CAAGAGTAGTAGATTTTATGAAACATGGAACAACTTTTACGACAATAAAAGCCGTGGTCATGTTGGA  
 ATACGTCGAAAGAGCAACATGGAATGACCGTTTCTCAGATATCTATGCTTTATGTGTGGCCTATCCTGAA  
 CCCCTTGGAGAAAGACTTTATACAGAACTAAGATTTTTTTGGAAAATCATGTTCCGGCATTTCATAAGA  
 GAGTTTTGGAGTCAGAAGAACAAGTACTTGTATGTATCATAGGTACTGGGAAGAATACAGCAAGGGTGC  
 AGACTATATGGACTGCTTATATAGGTATCTCAACCCAGTTTATAAAAAGAATAAATTAACAGAAGCG  
 GACCTTCAGTATGGCTATGGTGGTGTAGATATGAATGAACCACTTATGGAATAGGAGAGCTAGCATTGG  
 ATATGTGGAGGAAATTGATGGTTGAACCACTTCAGGCCATCCTTATCCGAATGCTGCTCCGAGAAATCAA  
 AAATGATCGTGGTGGAGAAGACCCAAACCAGAAAGTAATCCATGGGGTTATTAACCTCTTTGTTTCATGTT  
 GAACAGTATAAGAAAAAATCCCTTAAAGTTTTATCAGGAAATTTTTGAGTCTCCCTTTCTGACTGAAA  
 CAGGAGAGTATTCAAACAAGAAGCTTCAAATTTATTACAAGAATCAAACCTGCTCACAGTATATGAAAA  
 GTTTCTAGGTAGATTAAGATGAAGAAATTCGATGTCGAAAAACCTACATCCAAGTTCATATACTAAG  
 GTGATTTCATGAATGTCAACAACGAATGGTAGCAGACCCTTACAGTTTTTACATGCAGAATGTCATAATA  
 TAATTCGACAAGAGAAAAAATGACATGGCAATATGTACGCTTACTCCGTGCTGTGCCACTGGTTT  
 ACCTCATATGATTCAGGAGCTGCAAAACCACATCCATGATGAGGGCCTTCGAGCAACCAGCAACCTTACT  
 CAGGAAAAACATGCCAACACTATTTGTGGAGTCAGTTTTTGAAGTGCATGGTAAATTTGTTTCAGCTTATCA  
 AACTGTTTTGAATGGTATCAGCATTATGAGTGCCTGGATAAGGCCCTTACGTGAGTGTAAATTA  
 CAGAGAACCTAAGTCTGTTTGAAGCACCTGAACCTGCTTACTAAGTACTGTGACAACCTTACTGAAGAAG  
 TCAGCGAAAGGGATGACAGAGAATGAAGTGAAGACAGGCTCACGAGCTTATCACAGTGTCAAATACA  
 TTGATGACAAGGACGCTTTCAAAGTTCTACGCAAGAATGCTGGCAAAACGTTTAAATTCATGGGTATC  
 CATGTCTATGGACTCTGAAGAAGCCATGATCAACAAATTAAGCAAGCCTGTGGTTATGAGTTTACCAGC  
 AAGCTACATCGGATGTATACAGATAGAGTGTGAGCGCTGATCTCAACAATAAGTTCAACAATTTTATCA  
 AAAACCAAGACACAGTAATAGATTTGGGAATTAGTTTTCAAATATATGTTCTACAGGCTGGTGCCTGGCC  
 TCTTACTCAGGCTCCTTCATCTACGTTTGAATCCCCAGGAATTAGAAAAAGGTACAGATGTTTGAA  
 TTATTTTATAGCCAACATTTTCAGTGAAGGAACTTACATGGTTACATTATCTGTGTACAGGTGAAGTTA  
 AAATGAACTATTTGGGCAACCATATGTAGCCATGGTTACAACATACCAATGGCAGTCTCTTCTGCCTT  
 TAACAACAGTGAACCTGTGAGTTATAAAGAGCTTCAGGACAGCACTCAGATGAATGAAAAGGAACTGACA  
 AAAACAATCAAATCATTACTTGTGTGAAAATGATTAACCATGATTCAGAAAAGGAGATATTGATGCAG  
 AATCTTCGTTTTTCAATATGAACCTTTCAGCAGTAAAAGAACAAAATTTAAATTAACATCAATGCA  
 GAAAGACACCCACAAGAAATGGAGCAGACTAGAAGTGCAGTTGATGAGGACCGGAAAATGTATCTCAA  
 GCTGCTATAGTTCGTATCATGAAAGCACGAAAAGTGTCTCGGCACAATGCCCTTATTCAAGAGGTGATTA  
 GCCAGTCAAGAGCTAGGTTTAAATCCAGTATCAGCATGATTAAGAAGTATTGAAGTTCTGATAGACAA  
 ACAATACATAGAACGCAGCCAGGCGTCGGCAGATGAATACAGCTACGTCGCG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC231406 representing NM\_001198778  
Red=Cloning site Green=Tags(s)

MYRVTWSTFWLRFQHYTCTMSLKPRVDFDETWNKLLTTIKAVVMLEYVERATWDRFSDIYALCVAYPE  
 PLGERLYTETKIFLENHVRHLHKRVLESEEQVLVMYHRYWEEYSKGADYMDCLYRYLNTQFIKKNKLTEA  
 DLQYGYGGVDMNEPLMEIGELALDMWRKLMVEPLQAILIRMLLREIKNDRGGEDPNQKVIHGVIINSFVHV  
 EQYKKFPLKFYQEIFESPFLTETGEYKQEASNLLQESNCSQYMEKVLGRLKDEEIRCRKYLHPSSYTK  
 VIHECQQRMVADHLQFLHAECHNIIHQEKNDMANMYVLLRAVSTGLPHMIQELQNHIDEGLRATSNLT  
 QENMPTL FVESVLEVHGKVFQ LINTVLNGDQHFMSALDKALTSVVNYREP KSVCKAPELLAKYCDNLLKK  
 SAKGMTENEVEDRLTSFIVFKYIDDKDVFQKFYARMLAKRLIHGLSMSMDEEAMINKLKQACGYEFTS  
 KLHRMYTDM SVSADLNNKFNFIKNQDTVIDLGISFQIYVLQAGAWPLTQAPSSTFAIPQELEKSVQMFE  
 LFYSQHFSGRKL TWLHYLCTGEVKMNYLGKPYVAMVTYQMAVLLAFNNSVSYKELQDSTQMNEKELT  
 KTIKSLLDVKMINHDSEKEDIDAESSFSLNMNFSKRTKFKITTSMQKDTPOEMEQTRS AVDEDRKMYLQ  
 AAIVRIMKARKVLRHNALIQEVISQSRARFNPSISMIKKCIEVLIDKQYIERSQASADEYSYVA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001198778

**ORF Size:** 2292 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.

**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\\_001198778.2](#)

**RefSeq ORF:** 2295 bp

**Locus ID:** 8453

**UniProt ID:** [Q13617](#)

**Cytogenetics:** 10p11.21

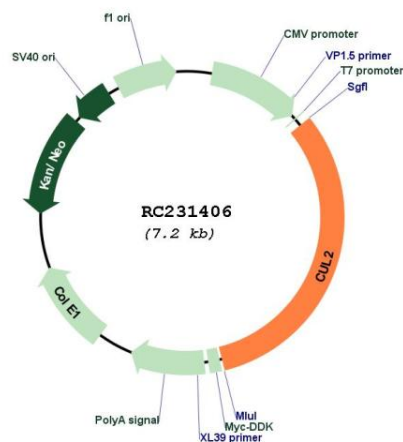
**Protein Families:** Druggable Genome

**Protein Pathways:** Pathways in cancer, Renal cell carcinoma, Ubiquitin mediated proteolysis

**MW:** 89.9 kDa

**Gene Summary:** Core component of multiple cullin-RING-based ECS (ElonginB/C-CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of target proteins. ECS complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:27565346). May serve as a rigid scaffold in the complex and may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme. The E3 ubiquitin-protein ligase activity of the complex is dependent on the neddylation of the cullin subunit and is inhibited by the association of the deneddylated cullin subunit with TIP120A/CAND1. The functional specificity of the ECS complex depends on the substrate recognition component. ECS(VHL) mediates the ubiquitination of hypoxia-inducible factor (HIF).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for RC231406

