

Product datasheet for **RG224650**

Cullin 1 (CUL1) (NM_003592) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cullin 1 (CUL1) (NM_003592) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cullin 1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG224650 representing NM_003592
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCGTCACCCGGAGCCAGAACCCACGGCCTGAAGCAGATTGGCCTGGACCAGATCTGGGACGACC
 TCAGAGCCGGCATCCAGCAGGTGTACACACGGCAGAGCATGGCCAAGTCCAGATATATGGAGCTCTACAC
 TCATGTTTATAACTACTGTACTAGTGTCCACCAGTCAAACCAAGCACGAGGAGCTGGAGTTCCTCCTTCT
 AAGTCGAAAAAGGGGCAGACACCTGGAGGAGCTCAGTTTGTGGCCTGGAATTATATAAACGACTTAAGG
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 GCCATTGAAAAGTGTGGAGAAGCTGCTTAAATGACCCAAAATGTATGTACAGACAGTCTTGATGTTT
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 GCAAAGATCTGAACGAGCAATTCAAAAAGCACTGACAACTCAGAACCCTAGACTTGGATTTACAGCAT
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 TGTGATCAAGAAATGCATTGACATTCATTAATTGAGAAAGAATATTTGGAGCGAGTGGATGGTGAAGGAC
 ACCTACAGTTACTTGGCT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG224650 representing NM_003592
 Red=Cloning site Green=Tags(s)

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MSSTRSQNP HGLKQIGLDQI WDDL RAGIQQVYTRQSM AKSRMEL YTHVYNYCTSVHQSNQARGAGVPPS
KSKKGQTPGGAQFVGL ELYKRLKEFLKNYL TNLKDGEDLMDES VLFY TQQWEDYRFS SKVLNGICAYL
NRHWVRRECDEGRKGIYEIYSLALVTWRDCLFRPLNKQV TNAVLK LIEKERNGETINTRLISGVVQSYVE
LGLNEDDAFAKGP TLT VYKESFESQFLADTERFY TRESTEFLQQNPVTEYMKKAEARLLEEQR RVQVYLH
ESTQDELARKCEQVLIEKHLEIFHTEFQNL LDADKNEDLGRMYNLYSRIQDGLGELK KLL ETHIHQGLA
AIEKCGE AALNDPKMYVQTVL DVHKKYNALVMSAFNNDAGFVAALDKACGRFINNNAVTKMAQSSSKSPE
LLARYCDSL LKKSSKNPEEALEDTLNQVMVVKYIEDKDV FQK FYAKMLAKRLVHQNSASDDAEASMS
KLKQACGF EYTSKLQRMFQDIGVSKDLNEQFKHL TNSEPLDLDFSIQV LSSGSWPFQQSCTFALPSELE
RSYQRFTA FYASRHSRKL TWL YQLSKGELVTNCFKNRYTLQASTFQMAILLQYNTEDAYTVQQLTDSTQ
IKMDILAQV LQILLKSKLLVLEDENANVDEVELKPD TLIKLYLGYKNKLRVNI NVPMKTEQKQE QETH
KNIEEDRKL LIQAAIVRIMKMRKVLKHQQLLGEVLTQLSSRFKPRVPVIKKCIDILIEKEYL ERVDGEKD
TYSYLA
  
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003592

ORF Size: 2328 bp

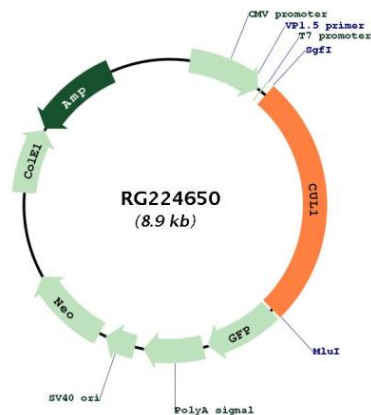
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<ol style="list-style-type: none">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_003592.3
RefSeq Size:	3226 bp
RefSeq ORF:	2331 bp
Locus ID:	8454
UniProt ID:	Q13616
Cytogenetics:	7q36.1
Domains:	CULLIN
Protein Families:	Druggable Genome
Protein Pathways:	Cell cycle, Oocyte meiosis, TGF-beta signaling pathway, Ubiquitin mediated proteolysis, Wnt signaling pathway

Gene Summary:

Core component of multiple cullin-RING-based SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of proteins involved in cell cycle progression, signal transduction and transcription. SCF complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:27565346). In the SCF complex, serves as a rigid scaffold that organizes the SKP1-F-box protein and RBX1 subunits. 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 exchange of the substrate recognition component is mediated by TIP120A/CAND1. The functional specificity of the SCF complex depends on the F-box protein as substrate recognition component. SCF(BTRC) and SCF(FBXW11) direct ubiquitination of CTNNB1 and participate in Wnt signaling. SCF(FBXW11) directs ubiquitination of phosphorylated NFKBIA. SCF(BTRC) directs ubiquitination of NFKBIB, NFKBIE, ATF4, SMAD3, SMAD4, CDC25A, FBXO5 and probably NFKB2. SCF(BTRC) and/or SCF(FBXW11) direct ubiquitination of CEP68 (PubMed:25704143, PubMed:25503564). SCF(SKP2) directs ubiquitination of phosphorylated CDKN1B/p27kip and is involved in regulation of G1/S transition. SCF(SKP2) directs ubiquitination of ORC1, CDT1, RBL2, ELF4, CDKN1A, RAG2, FOXO1A, and probably MYC and TAL1. SCF(FBXW7) directs ubiquitination of CCNE1, NOTCH1 released notch intracellular domain (NICD), and probably PSEN1. SCF(FBXW2) directs ubiquitination of GCM1. SCF(FBXO32) directs ubiquitination of MYOD1. SCF(FBXO7) directs ubiquitination of BIRC2 and DLGAP5. SCF(FBXO33) directs ubiquitination of YBX1. SCF(FBXO1) directs ubiquitination of BCL6 and DTL but does not seem to direct ubiquitination of TP53. SCF(BTRC) mediates the ubiquitination of NFKBIA at 'Lys-21' and 'Lys-22'; the degradation frees the associated NFKB1-RELA dimer to translocate into the nucleus and to activate transcription. SCF(CCNF) directs ubiquitination of CCP110. SCF(FBXL3) and SCF(FBXL21) direct ubiquitination of CRY1 and CRY2. SCF(FBXO9) directs ubiquitination of TT11 and TELO2. SCF(FBXO10) directs ubiquitination of BCL2.[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for RG224650