

## Product datasheet for **MC221493**

### **Cul1 (NM\_012042) Mouse Untagged Clone**

#### **Product data:**

|                    |                                       |
|--------------------|---------------------------------------|
| Product Type:      | Expression Plasmids                   |
| Product Name:      | Cul1 (NM_012042) Mouse Untagged Clone |
| Tag:               | Tag Free                              |
| Symbol:            | Cul1                                  |
| Synonyms:          | Cul-1                                 |
| Vector:            | pCMV6-Entry (PS100001)                |
| E. coli Selection: | Kanamycin (25 ug/mL)                  |
| Cell Selection:    | Neomycin                              |



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**Fully Sequenced ORF:** >MC221493 representing NM\_012042  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTCATCAAACAGGAGTCAGAATCCTCATGGACTGAAGCAGATTGGTCTTGACCAGATCTGGGATGACC  
 TCAGAGCTGGAATTCAGCAGGTGTATACCAGACAAAGCATGGCAAAGTCCAGATACATGGAACCTACAC  
 TCATGTTTATAACTACTGTACTAGTGTGCATCAGTCCAACCAAGCCCGGGTCTGGAGTCCCTCCTTCC  
 AAGTCAAAAAGGGGAGACTCCTGGGGAGCTCAGTTTGTGGCTTGGAGTTATAACAAGCATTGAAGG  
 AATTTTTGAAGAATTATTTGACAAATCTTCTAAGGATGGAGAAGATTTAATGGATGAGAGTGCCTGAA  
 GTTCTACACTCAGCAGTGGGAAGATTACCGATTCTCCAGCAAAGTGTGAATGGAATCTGTGCCTACCTC  
 AATAGACATTGGGTTCCCGTGAATGTGATGAAGGACGAAAAGGAATATATGAAATCTATCACTTGCAT  
 TGGTGACATGGAGAGATTGTTTGTTCAGGCCATTGAATAAACAGGTAACAAATGCTGTTTTAAAGTTGAT  
 TGAAAAGGAAAGAAATGGAGAAACCATCAATACAAGACTGATTAGTGGAGTTGTACAATCTTATGTGGAA  
 TTGGGGCTGAATGAAGATGATGCATTTGCAAAGGGCCCTACGTTAACAGTGTATAAAGAATCCTTTGAAT  
 CTCAATTTTTGGCTGACACAGAGAGATTTATACCAGAGAAAGTACTGAATTCCTACAGCAGAACCCAGT  
 TACTGAATATATGAAAAGGCTGAAGCTCGTTTGCTTGAGGAACAGCGGAGAGTTTACCTCCAC  
 GAGAGCACACAAGATGAAGTACGACGGAATGTGAGCAGGTCTCATTGAAAAACTTGGAAAATTTTTC  
 ACACAGAGTTTCAGAATTTATGGATGCTGACAAGAATGAAGATTTGGCCCGCATGTATAATCTTGATC  
 TAGAATTCAGGATGGCCTAGGAGAATGAAAAACTACTAGAGACACATATTCATAATCAGGGTCTTGCA  
 GCAATTTGAGAAGTGTGGAGAAGCTGCTCTAAATGACCCCAAGATGTATGTGCAGACAGTGGATGTTTC  
 ATAAAAATACAATGCCCTGGTGTGATGTCAGCATTCAACAACGATGCTGGCTTCGTAGCTCTTGATAA  
 GGCTTGTGGTCGCTTCATAAACAACAATGCGGTTACCAAAATGGCCAGTCATCCAGTAAATCCCCTGAG  
 CTGCTTGCTCGGTACTGTGACTCCTTGCTGAAGAAAAGTTCCAAGAACCAGAAGAGGCAGAAGTGAAG  
 ACACCCTCAATCAAGTGTGGTGGTCTTCAAGTACATCGAGGACAAAGATGTATTTCAGAAGTTCTATGC  
 AAAGATGCTTGCCAAGAGACTGGTACATCAAAACAGTGCAGTGCAGTGTGCTGAAGCAAGCATGATCTCC  
 AAGTTAAAGCAAGCTTGTGGTTTTGAGTACACTTCCAACTTCCAGCAATGTTTCAAGACATTGGTGTA  
 GCAAAGATCTGAATGAACAGTTCAAAAAACCTGACGAATTCAGAACCCTGGACTTGGACTTCAGTAT  
 TCAGGTCCTGAGTCTGGATCGTGGCCCTTTCAGCAGTCTGCACGTTTGCCTTGCCGTCAGAGTTGGAG  
 CGCAGTTATCAGCGATTTACAGCTTTCTACGCCAGCCGTCACAGTGGCAGAAAATGACATGGTTGTATC  
 AACTGTCCAAAGGGGAAGTACTACTAAGTCTTCAAAAACAGATACACTTTGCAGGCGTCCACATTTCA  
 GATGGCAATCCTGCTTCAAGTATAACACAGAAGAGCCTATACTGTGCAGCAGTTGACTGACAGCACTCAG  
 ATTAATAATGGACATTTTGGCACAAGTCTACAGATTTTACTGAAGTCGAAATGCTGGTCTTAGAAGATG  
 AAAATGCCAATGTTGATGAGGTGGAATGAAGCCAGACACCTTAATAAAGTTATATCTTGGTTATAAAAA  
 TAAGAAATGAGGGTTAATATCAATGTACCAATGAAAACGAAAGCAGGAACAAGAACTACACAC  
 AAAAATATAGAGGAAGACCGCAAACTACTGATTCAGGCGCCATCGTGAGAATCATGAAAATGAGGAAGG  
 TCCTGAAACACCAGCAGTACTTGGTGAAGTCTCACTCAGCTCTCCTCCAGTTCAAACCTCGGGTCCC  
 GGTGATCAAGAAATGCATTGATTTCTCATCGAAAAAGAATATTTGGAGCGAGTCGATGGTGAGAAGGAC  
 ACCTACAGTTACTTGGCT**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_012042  
**Insert Size:** 2331 bp

|                               |   |
|-------------------------------|---|
| <b>OTI Disclaimer:</b>        | 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).  |
| <b>Components:</b>            | 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).  |
| <b>Reconstitution Method:</b> | <ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol> |
| <b>RefSeq:</b>                | <a href="#">NM_012042.3</a> , <a href="#">NP_036172.1</a>   |
| <b>RefSeq Size:</b>           | 3171 bp   |
| <b>RefSeq ORF:</b>            | 2331 bp   |
| <b>Locus ID:</b>              | 26965   |
| <b>UniProt ID:</b>            | <a href="#">Q9WTX6</a>  |
| <b>Cytogenetics:</b>          | 6 B2.3  |

**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. 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. 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 cyclin E, 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 TTI1 and TELO2. SCF(FBXO10) directs ubiquitination of BCL2.[UniProtKB/Swiss-Prot Function]