

## Product datasheet for **MC224832**

### Cul7 (NM\_025611) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cul7 (NM_025611) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Cul7
Synonyms:	2510004L20Rik; AA409809; C230011P08Rik; p185; p193
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC224832 representing NM_025611 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGTAGGGGAGCTACGATACAGGGAATTCAGGGTGCCCTGGGGCTGGCTTGACGCGTATCCGGATG  
AATTGATCCGCCAACGGTTGGCCATAATGGGCACCCGAGTATCAGATCCGCTGGCTCATCCTCAGGCC  
CGGGGATGATGGGACCGGGACTCTACAGTGGACTGCAAGGCTGAGCATATCCTGTTATGGATGTCTGAC  
GATGAGATCTATGCCAACTGCCACAAGATGCTGGGCGAGAATGGCCAAGTCATCGCACCTCCCGGGAGT  
CCACTGAGGCAGGGGCCCTCGACAAGTCTGTGCTGGGGGAGATGGAAACAGATGTGAAGTCTTGATTCA  
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GTACTCAGTGCCTATGCCAGCATCGAGCCCTCACTGGCATCTTCAAAGACCCGAGGGTTGTGAAGTTC  
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CTCCCACGATGCTGGGACCCGGACCCAGATCCTTCTGTCTTTCAGCAACAAGAGGCCATTGAAAAGCAC  
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TCGTTTGCAGTTTTAATACCTATGCCTTGTATGTGCGGGACACGCTGCGGCCCGGGATGCGGGTACGGA  
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CCCAGCGCAGGTGTTGTGGGATCAACAGGCCATACCTACTGGTGCCTGGCACATGCTGGAGATCTTG  
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TGAGCATCGTCCCGCCGTCCAGCGCTGGAAGCCATAACTCAGCTCTTTGCCGAGCCTTACGTGGTACC  
CGAGGAGGAAGACAGGAAGAGAGCGGAACTGACCCAGGCTGAGTGGTGGGAGCTCCTCTTTCATC  
CGGCAGTTGAGTGGGACAGAGCGCTTACATCGTGGATCTCTGCAAGACCACCTGGAAGAGGAGCGCG



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TTCTGGACTACGATATGCTGCCTGAGCTGACCGTGCCCGTTGACTTGGCCAGGATCTGCTGTTGTCTCT  
 GCCTCAGCAACTTGAGGACAGTCTCTGAGGGACCTGTTGAGCTGCAGTGTCTACAGGAAGTATGGGCC  
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 AAGAGCAAGAAGGAAGAAGCCATTGGAGAAGCCGCGCTGTGGCTATGGCAGAGGAGGAGGATCAAGGGA  
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 GGAAAAGGCCGTGCTGCTAGGGTCTGGTCAAGCAGCCTCGGAGGGGAGCAACCTGCAGGAGCTCT  
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 TGCTGTAATGCAAGTCTGTAAGTGTGATGGAGCCCCACATGGAGTCCCTGAACCTGGCTCGGAGG  
 CCCCAATCCACCCTCACCTTCCACACCCTGCAGATTCGATCCCGGGGTGTCCTTACGCCTCCTGCACT  
 GATAACCACACCTTCTCCACTTCCGGTAG

ACGCGGCCGC TCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGA  
TTACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** Sgfl-NotI

**ACCN:** NM\_025611

**Insert Size:** 5070 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:** [NM\\_025611.5](#), [NP\\_079887.3](#)

**RefSeq Size:** 5546 bp

**RefSeq ORF:** 5070 bp

**Locus ID:** 66515

**UniProt ID:** [Q8VE73](#)

**Cytogenetics:** 17 C

**Gene Summary:**

Core component of the 3M and Cul7-RING(FBXW8) complexes, which mediates the ubiquitination of target proteins. Core component of the 3M complex, a complex required to regulate microtubule dynamics and genome integrity. It is unclear how the 3M complex regulates microtubules, it could act by controlling the level of a microtubule stabilizer. Interaction with CUL9 is required to inhibit CUL9 activity and ubiquitination of BIRC5. Core component of a Cul7-RING ubiquitin-protein ligase with FBXW8, which mediates ubiquitination and consequent degradation of target proteins such as GORASP1, IRS1 and MAP4K1/HPK1. Ubiquitination of GORASP1 regulates Golgi morphogenesis and dendrite patterning in brain. Mediates ubiquitination and degradation of IRS1 in a mTOR-dependent manner: the Cul7-RING(FBXW8) complex recognizes and binds IRS1 previously phosphorylated by S6 kinase (RPS6KB1 or RPS6KB2). The Cul7-RING(FBXW8) complex also mediates ubiquitination of MAP4K1/HPK1: recognizes and binds autophosphorylated MAP4K1/HPK1, leading to its degradation, thereby affecting cell proliferation and differentiation. Acts as a regulator in trophoblast cell epithelial-mesenchymal transition and placental development. Does not promote polyubiquitination and proteasomal degradation of p53/TP53. While the Cul7-RING(FBXW8) and the 3M complexes are associated and involved in common processes, CUL7 and the Cul7-RING(FBXW8) complex may have additional functions (By similarity). Probably plays a role in the degradation of proteins involved in endothelial proliferation and/or differentiation.[UniProtKB/Swiss-Prot Function]