

## Product datasheet for **MG209424**

### **Cul4b (BC004026) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Cul4b (BC004026) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cul4b
Synonyms:	2700050M05Rik; AA409770; CUL-4B; mKIAA0695
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG209424 representing BC004026  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGATAATGATCAGGAGCATTTTTTTGTTTCTGGATAGAAGTTATGTTCTTCAGAATTCATGCTACCC  
 CCATTTGGGACATGGGATTAGAGTTATTTAGGGCTCATATTATAAGTGATCAAAAAGTACAGACAAAAAC  
 GATTGATGGCATCCTTCTCTTGATTGAGAGAGAGCGGAATGGTGAAGCAATTGATAGAAGTTTACTTCGA  
 AGCCTTTTAAGTATGCTGTCTGATTTGCAAATTTACCAAGATTCTTTGAACAGCAATTTTGAAGAAA  
 CTAATCGGCTTTACGCAGCCGAAGGTCAGAAGTTAATGCAAGAAAGAGAGGTTCTGAGTATCTTCATCA  
 TGTTAATAAACGCCTAGAAGAAGAAGCTGACAGACTTATTACTTACTTAGATCAGACCACCCAGAAGTCA  
 CTAATTGCTTCTGTTGAAAAACAACCTTCTAGGTGAACACTAACGGCAATCTTCAAAAAGGTTAAATA  
 GCCTCCTTGATGAAAACCGAATCAAGATTTGTCTCTCCTGTATCAGCTCTTCAGTAGAGTTCGGGGTGG  
 AGTTCAGGTTCTTTACAGCAGTGGATTGAGTATATCAAGGCTTTTGAAGTACCATTGTTATTAATCCT  
 GAAAAAGATAAACTATGGTTCAAGAATTATTGGACTTTAAAGATAAAGTTGACCATATAATTGATACCT  
 GCTTTCTGAAAAATGAAAAATTTATCAATGCCATGAAAGAAGCTTTTGAACATTCATTAATAAAAGACC  
 AAATAAGCCAGCTGAAGTATAGCTAAGTATGTGGATTCAAACCTTCGTGCAGGCAACAAAGAAGCTACA  
 GATGAAGAGCTTGAGAAAATGTTGGATAAAAATAATGATTATATTTAGATTTATCTATGGTAAAGATGTTT  
 TTGAGGCTTCTATAAGAAAAGTTTAGCCAAACGCCTATTAGTTGGCAAGAGTGCATCAGTAGATGCTGA  
 AAAATCAATGCTGTCAAACGAAACACGAATGTGGAGCCGCTTTACCAGCAAGCTTGAAGGAATGTTCA  
 AAAGACATGGAGCTTTCTAAAGATATCATGATTCAGTTTAAACAGTATATGCAGAACCAGAATGTACCTG  
 GCAATATTGAATTAAGTAAATCCTGACAATGGGTTACTGGCCAACATATGTGCCTATGGAAGTCCA  
 TTTGCCCGCAGAGATGGTAAAGCTTCAGGAAATTTCAAGACATTTTACTTAGGCAAGCACAGTGGCAGG  
 AAACCTCCAGTGGCAGTCAACCTTGGGACTGTGTGCTAAAAGCTGAATTTAAAGAGGGCAAAAAAGAAC  
 TTCAGGCTCTCTTTTTCAAACCATGGTCTGCTAATGTTTAAAGAGGAGAAGAATTCAGTTTAGAAGA  
 GATCAAGCATGCTACTGGGATAGAGGATGGAGAATTAAGAAGAACACTGCAGTCACTAGCCTGTGGCAAA  
 GCTAGAGTTCTGGCTAAAAATCCTAAGGGCAAAGATTTGAAGATGGTGACAAATTTATTTGTAATGACG  
 ATTTCAAACACAACTATTCAGGATAAAGATCAATCAAATCCAGATGAAAGAAACGGTTGAAGAACAAGC  
 AAGCACTACAGAAAGATTTTCAAGACAGACAGTACCAATTTGATGCTGCGATCGTTTCAATTATGAAG  
 ATGAGAAAAACACTTAGCCACAATCTTCTGTTTTCAGAAGTCTACAATCAGCTAAAATTTCCAGTTAAAC  
 CTGCTGATCTTAAGAAGAGAATAGAATCCCTCATTGACCGGGACTACATGAAAGAGATAAAGAAAATCC  
 AAATCAGTACAACCTATATTGCA

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG209424 representing BC004026  
 Red=Cloning site Green=Tags(s)

MIMIRSIFFLDRTYVYLQNSMLPSIWDMLLELFRHIIISDQKVQTKIDGILLIERERNGEAIIDRSLLR  
 SLLSMLSDLQIYQDSFEQQFLQETNRLYAAEQKLMQEREVPEYLHHVNRLEEEADRLITYLDQTTQKS  
 LIASVEKQLLGEHLTAILQKGLNSLLDENRIQDLSLLYQLFSRVRGGVQVLLQQWIEYIKAFGSTIVINP  
 EKDKTMVQELLDFKDKVDHIIDTCFLKNEKF INAMKEAFETF INKRPNKP AELIAKYVDSKLRAGNKEAT  
 DEELEKMLDKIMIIIFRFIYGKDVFEAFYKDLAKRLLVGKSASVDAEKSMLSKLKHECGAAFTSKLEGMF  
 KDMELSKDIMIQFKQYMQNQNVPNGIELTVNILTMYWPTYVPMVHLPPEMVKLQEIFKTFYLGKHSR  
 KLQWQSTLGHCVLKAEFKEGKELQVSLFQTMVLLMFNEGEEFSL EEIKHATGIEDGELRRTLQSLACGK  
 ARVLAKNPKGKDIEDGDFICNDDFKHKLFRIKINQIQMKETVEEQASTTERVVFQDRQYQIDAAIYRIMK  
 MRKTLSHNLLVSEVYNQLKFPVKPADLKKRIESLIDRDYMERDKENPNQNYNIA

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** BC004026

**ORF Size:** 1844 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:** [BC004026](#), [AAH04026](#)

**RefSeq Size:** 3105 bp

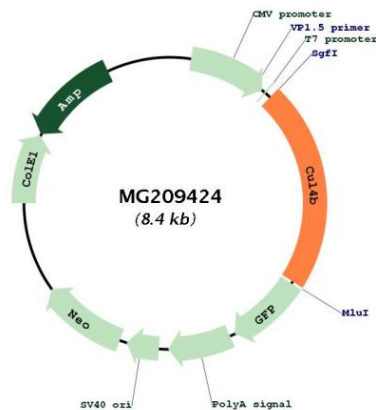
**RefSeq ORF:** 1844 bp

**Locus ID:** 72584

**Cytogenetics:** X A3.3

**Gene Summary:**

Core component of multiple cullin-RING-based E3 ubiquitin-protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins. The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable substrate recognition subunit. CUL4B may act within the complex as a scaffold protein, contributing to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme. Plays a role as part of the E3 ubiquitin-protein ligase complex in polyubiquitination of CDT1, histone H2A, histone H3 and histone H4 in response to radiation-induced DNA damage. Targeted to UV damaged chromatin by DDB2 and may be important for DNA repair and DNA replication. Required for ubiquitination of cyclin E, and consequently, normal G1 cell cycle progression. Regulates the mammalian target-of-rapamycin (mTOR) pathway involved in control of cell growth, size and metabolism. Specific CUL4B regulation of the mTORC1-mediated pathway is dependent upon 26S proteasome function and requires interaction between CUL4B and MLST8 (By similarity). With CUL4A, contributes to ribosome biogenesis (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MG209424