

Product datasheet for **MR209429**

Cul4a (NM_146207) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cul4a (NM_146207) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cul4a
Synonyms:	2810470J21Rik; AW495282
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR209429 representing NM_146207
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGGACGAGGGCCCTCGGAAGGGCAGCGTCTCGGCTCTCATGGGCCACCAACGGCCCTACCAAGC
 CCGCGCGCTTGGCCGGTGGCCCCGCAAGCCGGGGGCACGGGAGGCTCCAGGAAGCTGGTCATCAAGAA
 CTTCCGAGACAGGCCGGCTGCCTGACAACTACACTCAGGACACGTGGCGGAAGCTTCACGAAGCGGT
 AAGGCCATCCAGAGCAGCACATCCATCAGGTACAACCTGGAGGAGCTGTACCAGGCTGTTGAAAATCTTT
 GTTCTCACAAAGTCTCCCCAACGCTCTACAAGCAGCTGCGCCAGGCTGTGAAGACCATGTCAGGCCCA
 GATCCTCCATTAGAGAAGACTCACTAGACAGCGTTTTATTTCTAAAGAAGATTAACACATGCTGGCAA
 GATCACTGCAGACAAATGATCATGATCAGAAGCATCTTCTGTTTCTGGATCGAACCTACGTCCTCCAGA
 ATTCATGCTGCCTTCTATCTGGGACATGGGCCTAGAGCTGTTTAGGAACCACATCATCAGCGACAGGAT
 GGTGCAGAGTAAGACCATTGATGGGATCCTGCTGCTGATTGGGCGTGAACGAAGTGGAGAGGCTGTGGAC
 AGGAGTCTGCTTCGGAGTTTGCTAAGCATGCTCTCAGATCTCCAGGTGTACAAAGACTCATTGAGCTGA
 AGTTCTTGAAGAGACTAACTGTCTATACGCTGCTGAAGGCCAGAGGCTGATGCAGGACAGGGAGTTCC
 AGAATACCTTAACCATGTGAGCAAACGCTAGAAAGAGGAAGCAGACCGAGTGATCACCTACTTAGACCAC
 AGCACACAAAAACCGTTGATTGCCTGTGTGGAGAAACAGCTGTTAGGAGAACATTTGACAGCAATTTAC
 AGAAAGGCCTAGAGCACCTGCTGGATGAGAACAGGGTGCCTGACCTCACCCAGATGTACCAGCTCTTCAG
 CCGGGTGAAGGAGGGCAGCATGCGCTGCTGCAGCACTGGAGCGAGTACATCAAGACCTTTGGAACAACC
 ATGTGCATCAATCCTGAGAAAGACAAAGACATGGTCCAAGACCTGCTGGACTTTAAGGACAAAGTGGACC
 ACGTGGTGGAGGTGTGCTTCCAGAGGAACGAGCGCTTCATCAACCTGATGAAGGAGTCTTCGAGACGTT
 CATCAACAAGAGACCAAACAAGCCTGCAGAGCTCATTGCCAAGCAGTGGACTCAAAGTTACGGGCCGGC
 AACAAAGAAGCCACAGATGAGGAACTGGAGAGGATCCTGGACAAGATCATGATTCTCTCCGTTTCATCC
 ATGGTAAAGATGTCTTTGAAGCGTTTTATAAGAAAGACTTAGCAAAAAGGCTGCTGGTGGGGAAGAGCGC
 GTCGGTGGACGCGGAGAAGTCCATGCTGTGCAAGCTCAAGCACGAGTGGGAGCTGCGTTTACCAGCAAA
 CTGGAGGGCATGTTCAAGGACATGGAGCTCTCAAAGACATCATGGTCACTTCAAGCAGCATATGCAGA
 ACCAGAGTGCAGCCAGGCCCATGACCTCACGGTGAACATACTCACCATGGGCTACTGGCCACGTACAC
 ACCCATGGAAGTGCACCTCCCTCCAGAGATGGTCAGACTTCAGGAAGTATTCAAGACGTTTACCTGGGC
 AAGCACAGTGGGCGAAGCTGCAATGGCAGACAACGCTGGGACACGCCGTGCTGAAGGCGGACTTTAAGG
 AGGGGAAGAAGGAGTCCAGGTATCCCTCTTCCAGACGCTGGTGTGCTCATGTTCAACGAAGGGGATGG
 ATTTAGCTTTGAAGAAATAAAAATGGCCACTGGCATAGAGGACAGTGAGTTGCGAAGAACACTACAGTCT
 CTGGCCTGTGGTAAAGCACGGGTCTAATTAAGTCCCAAAGGAAAGGAGTGGAGATGGAGATAAGT
 TCATCTTCAATGCAGACTTCAAACACAAGTTGTTCCAGAAATAAGATCAATCAATCCAGATGAAGGAGAC
 CGTTGAAGAACAGGTTAGCACTACAGAGAGAGTATTCCAGGATAGACAGTACCAGATCGACGCTGCTATA
 GTCAGAATAATGAAAATGAGGAAGACACTTGGTCATAATCTTCTAGTTTCTGAATTATACAATCAGCTGA
 AATTTCCAGTGAAGCCTGGAGATTTGAAAAAAGGATTGAGTCACTTATAGACAGAGACTATATGGAACG
 AGACAAAGACAGTCCAAATCAGTACCACTACGTGGCA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR209429 representing NM_146207
 Red=Cloning site Green=Tags(s)

MADEGPRKGSVSALMGRNTGLTKPAALAGGPAKPGGTGGSRKLVIKNFRDRPRLPDNYTQDTWRKLHEAV
 KAIQSSTSIRYNLEELYQAVENLCSHKVSPTLYKQLRQVCEHVQAQILPFREDSLDSVLFKKINTCWQ
 DHCRCQMIMIRSIFLFLDRTYVLQNSMLPSIWMGLELFRNHIISDRMVQSKTIDGILLIGRERSGEAVD
 RSLRLSLLSMLSDLQVYKDSFELKFLLEETNCLYAAEQRLMQDREVPEYLNHVSKRLEEEADRIVITYLDH
 STQKPLIACVEKQLLGEHLTAILQKGLEHLLDENRVPDLTQMYQLFSRVKGGQHALLQHWISEYIKTFGTT
 IVINPEKDKDMVQDLLDFKDKVDHVVEVCFQRNERFINLMKESFETFINKRPNKPAELIAKHVDSKLRAG
 NKEATDEELERILDKIMILFRFIHGKDVFEAFYKDLAKRLLVGKSASVDAEKSMKSLKHCEGAAFTSK
 LEGMFKDMELSKDIMVHFQHMNQNSAPGIDLTVNILTMGYWPTYTPMEVHLPPMVRVLRQEVFKTFYLG
 KHSGRKLQWQTTLGHAVLKADFKEGKKEFQVSLFQTLVLLMFNEGDGFSFEEIKMATGIEDSELRRTLQS
 LACGKARVLKSPKGKEVEDGDKFIFNADFHKHLFRIKINQIQMKETVEEQVSTTERVFDQROQYIDAAI
 VRIMKMRKTLGHNLLVSELYNQLKFPVKPGDLKKRIESLIDRDYMERDKDSPNQYHYVA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9034_f07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_146207

ORF Size: 2277 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_146207.3](#)

RefSeq Size: 3628 bp

RefSeq ORF: 2280 bp

Locus ID: 99375

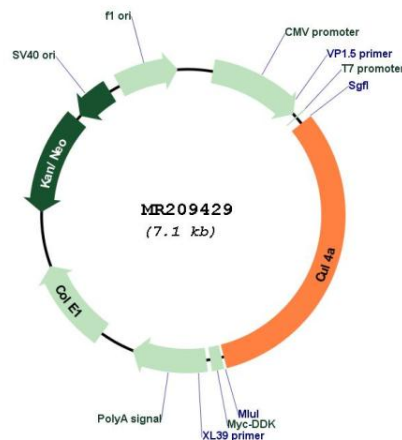
UniProt ID: [Q3TCH7](#)

Cytogenetics: 8 A1.1

MW: 88.2 kDa

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. As a scaffold protein 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 E3 ubiquitin-protein ligase complex depends on the variable substrate recognition component. DCX(DET1-COP1) directs ubiquitination of JUN. DCX(DDB2) directs ubiquitination of XPC. In association with RBX1, DDB1 and DDB2 is required for histone H3 and histone H4 ubiquitination in response to ultraviolet and may be important for subsequent DNA repair. DCX(DTL) plays a role in PCNA-dependent polyubiquitination of CDT1 and MDM2-dependent ubiquitination of TP53 in response to radiation-induced DNA damage and during DNA replication. In association with DDB1 and SKP2 probably is involved in ubiquitination of CDKN1B/p27kip. Is involved in ubiquitination of HOXA9. DCX(DTL) directs autoubiquitination of DTL (By similarity). The DDB1-CUL4A-DTL E3 ligase complex regulates the circadian clock function by mediating the ubiquitination and degradation of CRY1 (By similarity). With CUL4B, contributes to ribosome biogenesis (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:

Circular map for MR209429