

## Product datasheet for **MR201830**

### Cdc42 (NM\_009861) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Cdc42 (NM\_009861) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Cdc42  
**Synonyms:** A1747189; AU018915  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR201830 representing NM\_009861  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCAGACAATTAAGTGTGTTGTTGGTGATGGTGCTGTTGGTAAACATGTCTCCTGATATCTACA  
CAACAAACAAATCCCATCGGAATATGTACCACTGTTTTGACAACTATGCAGTCACAGTTATGATTGG  
TGGAGAGCCATACACTCTGGACTTTTGTACTGCAGGGCAAGAGGATTATGACGGACTACGACCGCTA  
AGTTATCCACAGACAGATGTTTTCTAGTATGTTTCTCAGTGGTCTCTCCATCCTCATTTGAAAATGTGA  
AAGAAAAGTGGTGCCTGAGATAACTCACCAGTGTCCAAAGACTCCTTTCTTGCTTGGTGGACCCAAAT  
TGATCTCAGAGATGACCCCTCTACTATTGAGAACTTGCCAAGAACAAACAGAAGCCTATTACTCCAGAG  
ACTGCTGAAAAGCTGGCGCGGGATCTGAAGGCTGTCAAGTATGTGGAGTGCTCTGCCCTCACACAGAAAG  
GCCTAAAGAATGTGTTGATGGAGCAATATTGGCTGCCCTGGAGCCTCCAGAACCAGAAGAGCCGAG  
GTGTGTGCTGCTA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR201830 representing NM\_009861  
Red=Cloning site Green=Tags(s)

MQTIKCVVVGDAVGKTCLLISYTTNKFPEYVPTVFDNYAVTMIGGEPYTLGLFDTAGQEDYDGLRPL  
SYPQTDVFLVCFSVVSPSSFENVKEKWPEITHHCPKTPFLLVGTQIDLRDDPSTIEKLAKNKQKPITPE  
TAEKLARDLKAVKYVECSALTQKGLKNVFDGAILAALEPPEPKKSRRCVLL

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**



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Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_009861

ORF Size: 573 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](mailto: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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_009861.1](#), [NM\\_009861.2](#), [NM\\_009861.3](#), [NP\\_033991.1](#)

**RefSeq Size:** 2063 bp

**RefSeq ORF:** 576 bp

**Locus ID:** 12540

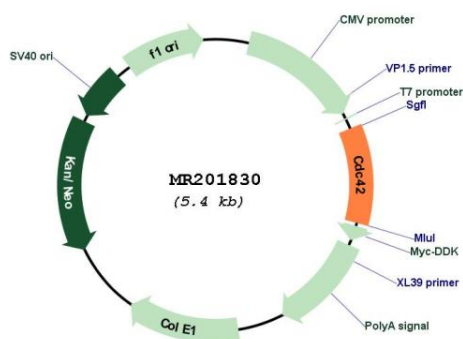
**UniProt ID:** [P60766](#)

**Cytogenetics:** 4 69.83 cM

**MW:** 21.7 kDa

**Gene Summary:** Plasma membrane-associated small GTPase which cycles between an active GTP-bound and an inactive GDP-bound state (PubMed:24352656). In its active state binds to a variety of effector proteins to regulate cellular responses. Involved in epithelial cell polarization processes. Regulates the bipolar attachment of spindle microtubules to kinetochores before chromosome congression in metaphase. Regulates cell migration (By similarity). In neurons, plays a role in the extension and maintenance of the formation of filopodia, thin and actin-rich surface projections. Required for DOCK10-mediated spine formation in Purkinje cells and hippocampal neurons (PubMed:25851601). Facilitates filopodia formation upon DOCK11-activation (PubMed:22494997). Upon activation by CaMKII, modulates dendritic spine structural plasticity by relaying CaMKII transient activation to synapse-specific, long-term signaling (By similarity). Also plays a role in phagocytosis through organization of the F-actin cytoskeleton associated with forming phagocytic cups (By similarity).[UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for MR201830