

## Product datasheet for **MG217902**

### Cdc42bpa (NM\_001033285) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cdc42bpa (NM_001033285) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cdc42bpa
Synonyms:	A930014J19Rik; DMPK-like
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG217902 representing NM_001033285 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCCGGAGAAGTGCCTTTGAGGCAGTTGGAGCAGTTTATTTAGATGGCCAGCTCAGACCAATGGGC  
AGTGCTTCAGTGTGGAGACGCTACTGGACATCCTCATCTGTCTTTACGATGAATGCAATAATTCTCCATT  
GAGAAGAGAGAAGAACATTCTTGAATATCTAGAATGGGCTAAACCATTTACTTCTAAAGTGAAGCAAATG  
CGATTACATAGAGAAGACTTTGAAATATTAAGGTGATTGGTCGAGGAGCTTTGGGGAGGTTGCTGTAG  
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AGTCTGAAAGAAGAGATTGAAAACTAAGGAAACAAGTAGCAGAAGTGAATCATTGGAACAACAACCTTG  
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GCCCTGCGAGGGACTATGATGGAGAGGACTCTGATTCTCAAGGCATCCACAGCTTCCAACAGCTCTA

ACCTGAGCAGCCCCCAAGTCCCATTTCACCCAAAAGACCAAGAGCCTCTCCCTGGAGAGCACAGACCG  
CGGGAGCTGGGATCCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>MG217902 representing NM\_001033285  
Red=Cloning site Green=Tags(s)

MSGEVRLRQLEQFILDGPAQTNGQCFSVETLLDILICLYDECNNSPLRREKNILEYLEWAKPFTSKVKQM  
RLHREDFEILKVI GRGAFGEVAVVVKLNADKVFAMKILNKWEMLKRAETACFREERDVLVNGDSKWITTL  
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RVGDNKIHQIELIPSDQLVAVISGRNRHVRLFPMSALDGRETDYKLAETKGCQTI AAGKVRHGALSCL  
CVAMKRQVLCYELFQSKTRHRKFKEIQVPCNVQWMAIFSEHL CVGFQSGFLRYPLNGEGGPCNMLHSNDH  
TLSFISHQPMDALCAVEISNKEYLLCFNSIGIYDCQGRSRQQLMWPANPSSCCYNAPYLSVYSENAV  
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KRRYSFRVPEEERMQRREMLRDPENRNLISNPTNFNHI AHMGPDGIQILKDLPMNRPQESRTVFSG  
SVSIPSITKSRPEPVRSMSASSGLSARSSAQNGSALKREFSGGSYNTKRQMPSPSEGLSSGGMDQGS  
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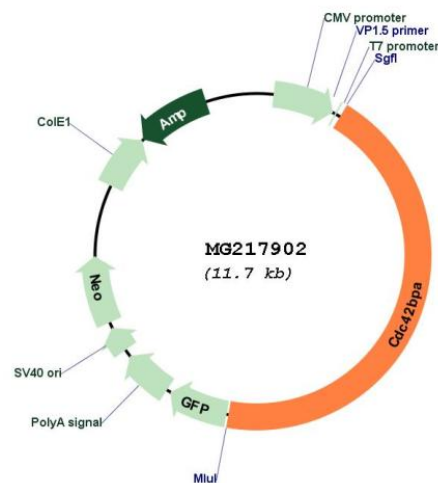
TRTRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI



## Plasmid Map:



ACCN: NM\_001033285

ORF Size: 5196 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: [NM\\_001033285.1](#), [NP\\_001028457.1](#)

RefSeq Size: 8656 bp

RefSeq ORF: 5199 bp

Locus ID: 226751

Cytogenetics: 1 H4

**Gene Summary:**

Serine/threonine-protein kinase which is an important downstream effector of CDC42 and plays a role in the regulation of cytoskeleton reorganization and cell migration. Regulates actin cytoskeletal reorganization via phosphorylation of PPP1R12C and MYL9/MLC2. In concert with MYO18A and LRP35A, is involved in modulating lamellar actomyosin retrograde flow that is crucial to cell protrusion and migration. Phosphorylates: PPP1R12A and LIMK2. May play a role in TFRC-mediated iron uptake (By similarity). In concert with FAM89B/LRAP25 mediates the targeting of LIMK1 to the lamellipodium resulting in its activation and subsequent phosphorylation of CFL1 which is important for lamellipodial F-actin regulation (PubMed:25107909).[UniProtKB/Swiss-Prot Function]