

Product datasheet for **MG221283**

Cdc42bpb (NM_183016) Mouse Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Cdc42bpb (NM_183016) Mouse Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | Cdc42bpb |
| Synonyms: | MRCKb |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |
| ORF Nucleotide Sequence: | >MG221283 representing NM_183016 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCGGCCAAGGTGCGGCTCAAGAAGCTGGAGCAGCTGCTCCTGGACGGCCGTGGCGCAACGATAGCG
CCCTGAGCGTGGAGACGCTGCTGGACGTGCTGGTGTGCCTTTACACCGAGTGCAGCCACTCGGCGTGGC
CCGCGACAAGTATGTGGCGGAGTTCCTCGAGTGGGCCAAGCCTTTCACCCAGCTCGTGAAGGACATGCAG
CTTCATCGAGAAGACTTCGAGATCATCAAAGTATCGGGAGAGGAGCCTTTGGTGAAGTTGCTGTTGTCA
AAATGAAGAACACTGAACGAATTTATGCAATGAAAATTCTCAACAAATGGGAAATGCTAAAGAGAGCAGA
GACAGCTTGTTCGAGAAGAGCGTGACGTGCTGGTGAACGGCGACTGCCAGTGGATCACGGCTCTGCAC
TATGCCTTTCAGGATGAGAACTACCTGTACTTGGTTCATGGATTACTATGTAGGTGGTGTCTGCTGACCC
TGCTGAGTAAAGTTGAAGACAAGCTTCCGGAAGACATGGCGAGGTTTACATTGGCGAGATGGTGTGGC
CATTGACTCGATCCACCAGCTCCACTATGTGCACAGAGACATCAAGCCCAGAACGTCCTTCTAGATGTG
AACGGTACATCCGCCTGGCTGACTTTGGCTCGTGTGAAGATGAACGATGATGGCACTGTTCACTT
CCGTGGCCGTGGGCACACCTGACTACATCTCACCAGAGATCCTGCAGGCCATGGAGGATGGCATGGGCAA
ATACGGGCCCGAGTGTGACTGGTGGTCTGGCGTCTGCATGTATGAGATGCTATACGGAGAAAACCCCG
TCTACGCAGAGTCTCTGGTGGAGACATACGGGAAGATCATGAACCACGAGGAGCGGTTTCAGTTCCTCC
CCATGTCACCGATGCTCTGAAGAAGCAAAAGACCTTATCCAGAGACTAATATGCAGCAGAGAGCGCCG
ACTTGGGCAGAATGGAATAGAAGACTTTAAGAAACACGCATTCTTTGAAGGTCTGAATTGGGAGAATATA
CGAAACCTTGAAGCGCCCTACATTTCCGATGTGAGCAGCCCTTCGGACACGTCCAACCTTCGATGTGGACG
ACGACATGCTGAGAAACATTGAAATCTTACCTCCCGGCTCTCACACGGGCTTCTCGGACTGCATTTGCC
CTTCATCGGTTTACATTCACGACGAAAGCTGCTTTTCTGACCGGGCTCTCTGAAGAGCATGACTCAG
TCTAACACGCTAACCAAGACGAAGATGTGCAGCGGGACTGGAGAACAGCTTGCAGATCGAAGCGTACG
AGCGAAGGATACGGAGGCTGGAGCAGGAGAAGCTGGAGCTCAGCCGGAAGCTGCAAGAATCCACCCAGAC
TGTGCAGTCCCTCACGGTTCACACGGGCCCTGGGCACTCAAACCGCACAAGGAAATCAAGAGGCTG



[View online »](#)

AATGAAGAGCTTGAACGCATGAAGAGTAAAATGGCAGATTCAAACAGGCTCGAACGCCAGCTGGAGGACA
 CAGTGACACTTCGCCAGGAGCATGAGGACTCCACACACCGGCTGAAGGGCCTCGAGAAGCAGTACCGCC
 GGCCCGCAGGAGAAGGAAGAAATTGCACAAGCAATTGGTTGAGGCTTCAGAGCGATTGAAATCCCAGACC
 AAAGAACTTAAAGACGCGCATCAGCAGCGAAAACGGGCCCTGCAGGAGTTCTCAGAGCTCAATGAGCGCA
 TGGCGGAGCTCAGGTCGCTGAAGCAGAAGGTGTCCCGTCAGCTCCGGGACAAGGAGGAGGAGATGGAGGT
 GGCCATGCAGAAGATCGACTCCATGCGGCAGGACCTCCGCAAGTCTGAGAAGTCCAGGAAAGAGCTGGAA
 GCTCGGCTTGAGGACGCGAGCTGCCGAGGCCCTAAGGAGCGGAAGCTCCGAGAACACAGCGAGAGCTTCT
 GTAAGCAGATGGAGCGCGAGCTCGAGGCCCTCAAGGTAAGCAAGGAGGCCGGGGCCAGGGGCCCGCTC
 GGAACATCAGCAGGAGATCTCCAAAATCAGGTCAGAGCTCGAGAAGAAAGTCTTGTCTACGAGGAGGAG
 CTGGTGCGCCGAGAGGCCCTCCACGTGCTAGAAGTAAAGAACGTGAAGAAGGAAGTCCACGACTCCGAAA
 GCCACCAGTTGGCCCTGCAGAAAGAGGTCTGATGCTGAAAGACAAGTTAGAAAAGTCAAAGCGAGAACG
 GCACAGTGAGATGGAGGAGGCCATAGGCACCGTGAAGGACAAGTACGAACGGGAGAGGGCCATGCTGTT
 GATGAGAACAAAGAAGTTAACAGCAGAAAACGAAAAGCTTTGTTCCCTTTGGATAAACTAACAGCCAAA
 ACAGACAGCTGGAAGATGAGCTGCAGGATCTGGCATCAAAGAAGGAGTCAAGTTCGCGACTGGGAGCGCA
 GATCGCAGAGATCATTAGTGGGTGAGCATGAGAAAGATGCCAGAGGCTACCTCAAGCCCTTGCTTCT
 AAGATGACCGAAGAGCTTGAGACCTTGCGAAGTCTAGTTTGGGATCCAGGACACTGGATCCACTCTGGA
 AAGTTCGTGCGAGTCAGAAGCTGGACATGTCTGCACGGCTGGAATTGCAGTCTGCTCTTGAGGCCGAGAT
 CCGTGCCAAAACAGCTCGTTCAGGAGGAGCTGAGGAAGGTCAAAGACAGCAGCCTGGCCTTCGAAAGCAA
 CTGAAGGAATCGGAAGCGAAAAACAGGGAATTGTTAGAAGAAATGCAAAGTCTGAGGAAGAGGATGGAA
 AGAAGTTTAGAGCGGATACAGGGCTCAAACCTCCAGATTTCCAGGATTCTATCTTTGAGTATTTCAACAC
 TGCTCCTCTTGACATGATCTGACTTTTGAACAGCTCAGCTAGTGACCAGGAAACACAGGCTTCAAAG
 ATGGACTGTGCCATCAGTGTCTGTAGCCAGGACACAGAGCAGCAGGAGGATATGGCTCGGCCACAGC
 AGAGCCGTCTCTGTGCCCTGCCAGCAGCAGGCCCTCGCCATGGCTGGACCGAAGCCAAAGCCCA
 CCAGTTGAGCATCAAGTCTTCCCTAGCCCAACCAAGTGCAGCCACTGCACGCTCTGATGGTTCGACTG
 ATCCGACAGGGCTACGCCTGTGAGGTCTGTGATTTTCTGCCATGTGTCTGCAAAGACAGCGCTCCCC
 AGGTGTGCCCCATACCTCCTGAGCAGTCCAAGAGGCCCTTGGCGTAGACGTGCAGAGGGGCATAGGCAC
 GGCTACAAGGGCTACGTCAAGGTCCCAAAGCCACAGGCGTGAAGAAAGGATGGCAGAGGGCTTACGCC
 GTGGTCTGTGACTGCAAACCTTCTCTGTACGACCTGCCAGAAGGGAAAGTGCACCCAGCCCGGTGTCGTT
 CCAGTCAAGTCTTGACCTCAGAGATGAGGAGTTTGTGTGAGTTCAGTCTGCGCTCAGATGTTATCCA
 TGCTACACGCCGAGACATTCGTGCATATTCAGGGTGACGGCCTCTCTTAGGTTGCTTCTAAGACC
 AGCTCACTGCTCATCCTGACGGAGAACGAGAATGAAAAGAGGAAGTGGGTAGGGATCCTGAAGGGCTGC
 AGGCCATCTTGCAACAAGAACCGGCTGAAGAGCCAGGTAGTGCACGTGCACAGGAGGCCACGACAGCTC
 GCTGCCGCTCATCAAGGCCGTCTGGCTGCTGCTATCGTGGATGGAGACAGGATTGCGGTGCGCCTGGAA
 GAAGGGCTCTACGTCAATTGAGCTCACCCGAGACGTGATCGTCCGCGCTGCTGACTGCAAGAAGGTGTACC
 AGATCGAGCTGGCGCCAAAGGAGAAGATCGCCATCCTCCTGTGTGGCCGGAACCACCATGTGCACCTCTA
 CCCCTGGTCTCCTTCGACGGAGCAGAAGCGAGCAACTTTGACATCAAGTCCCAGAAACAAAGGGCTGC
 CAGCTCATAGCGACAGGGACGCTGAGGAAGAGCTCGTCCACCTGCCTGTTGTGCTGTGAAGCGACTAA
 TCCTTTGCTACGAGATCCAGAGAACTAAGCCTTTCCACAGGAAGTTCAGTGAGCTGGTGGCTCCGGGACA
 CGTGACGTGGATGGCCGTGTTCAAGGACAGGCTCTGTGTTGGCTACCCCTCTGGGTTCTCTCTGTTGAGC
 ATCCAGGGGACGGGCCGCTCTCGACCTGGTAAATCCCACTGACCCCTCGCTCGGTTCTCTCACAGC
 AGTCTTTCGATGCCCTCTGTGCTGTGGAGCTCAAAGTGAAGGAGTACCTGCTTGTCTTACGCCACATGGG
 ACTGTACGTGGACCTCAAGGTCGGAGGTACGCATGCAGGAGCTCATGTGGCTGCGGCTCCTGTGCGC
 TGTAGTTGCAGCCCAACCATGTACAGTGTACAGCGAATACGGGGTGGATGCTTTCGACGTGCGCACCA
 TGGAGTGGGTTTACAGACATCGGCTGCGGAGGATAAGACCTCTGAACTCTGATGGCAGCCTCAACCTGCT
 GGGCTGTGAGCCCTCGCTCATCTACTTCAAAAACAAGTTCTCAGGAACAATCCTCAATGTGCCCGAC
 ACCTCGGACAACAGCAAGAAGCAGATGCTGAGGACACGGAGCAAAACGGCGTTTTGTCTTCAAGGTTCCCG
 AGGAAGAGCGGCTACAGCAGCGGAGAGATGCTCAGAGACCCCGAACTGCGATCCAAAATGATATCCAA
 CCCAACCAACTTCAACCAGTGGCTCACATGGGCTCTGGGGATGGCATGCAGGTGCTCATGGACCTGCCT
 CTGAGTGTGCACCCACTGTCCAGGAGGAGAAGCAGGGCCCTACCCAGCAGGCCCTCCCCGGCAGCCGC
 CATCCAGGAGCAAGCCCTATGTCTCGTGGCCGTGCTCAGGTGGGTCGAGCCTGGAGTGCCTGTGCCTCT
 GAGGAGCATGTCCGACCCGACCAAGGATTTTGACAAAAGAGCCTGACTCTGATTCCACCAAACTCAACT
 CCATCAAATAGCTCAACCCTAGCGGCCCCCAAGCCCAACTCGCCCCATCGGAGCCAGCTCCCTATGG

AAGGCCTGGACCAGCCATCCTGTGACGCC

ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG221283 representing NM_183016

Red=Cloning site Green=Tags(s)

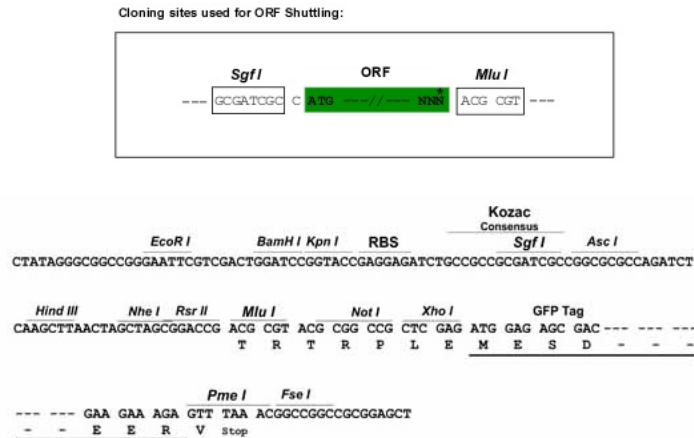
MSAKVRLKKLEQLLLDGPWRNDSALSVETLLDVLVCLYTECSHSALRRDKYVAEFLEWAKPFTQLVKDMQ
 LHREDFEIIKVIIGRGAFFEVAVVKMKNTERIYAMKILNKWEMLKRAETACFREERDVLVNGDCQWITALH
 YAFQDENLYLVMDYYVGGDLLTLLSKFEDKLPEDMARFYIGEMVLAIDSIHQHLYVHRDIKPDNVLLDV
 NGHIRLADFGSCLKMNDGTVQSSVAVGTPDYISPEILQAMEDGMGKYGPECDWWSLGVCMEMLYGETP
 FYAESLVETYGKIMNHEERFQFP SHVTDVSEEAKDLIQRLICSRERRLGQNGIEDFKKHAF FEGLNWENI
 RNLEAPYIPDVSSPSDTSNFDVDDMLRNIEILPPGSHTGFSGLHLPFIFGFTTTESCFSDRGSLKSMQT
 SNLTKDEDVQRDLENSLQIEAYERRIRRLQEKELESRLKLESTQTVQSLHGSTRALGNSNRDKEIKRL
 NEELERMKSKMADSNRLERQLEDVTLRQEHEDSTHRLKGLEKQYRLARQEKEELHKQLVEASERLKSQT
 KELKDAHQQRKRALQEFSELNERMAELRSLKQKVSRLRDKKEEMEAMQKIDSMRQDLRSEKSRKELE
 ARLEDAAAEASKERKLRHSESEFCQMERELEALKVKQGGRGPAAASEHQEISKIRSELEKLVFYEEE
 LVRREASHVLEVKNVKKEVHDESHQLALQKEVLMKDKLEKSKRERHSEMEEAIGTVKDKYERERAMLF
 DENKKLTAENEKLCFVDKLT AQNRQLEDELQDLASKKESVAHWAEQIAEIIQWVSDEKDARGYLQALAS
 KMTEELETLRSSSLGSRTLDPLWKVRRSQKLDMSARLELQSALEAEIRAKQLVQEELRKKVDSLAFESK
 LKSEAKNRELEEMQSLRKRMEEFKFRADTGLKLPDFQDSIFEYFNAPLAHDLTFRTSSASDQETQASK
 MDLSPSVSVATSTEQQEDMARPQQRPSVPLPSTQALAMAGPKPKAHQFSIKSFPSPSTQCSHCTSLMVGL
 IRQGYACEVCAF SCHVCKDSAPQVCPPIPEQSKRPLGVDVQRGIGTAYGYVKVPKPTGVKKGWQRAYA
 VVCCKLFLYDLPEGKSTQPGVVASQVLDLRDEEFVAVSSVLASDVIAHATRRDIPCFRVTASLLGSPSKT
 SSLLILTENENEKRKVGWGLEGLQAILHKNRLKSQVVHVAQEA YDSSPLIKAVLAAAIVDGDRIAVGLE
 EGLYVIELTRDVI VRAADCKKVYQIELAPKEKIAILLCGRNHHVHLYPWSSFDGAEASNFDIKLPETKGC
 QL IATGTLRKSSSTCLFVAVKRLILCYEIQRTPFHRKFSELVAPGHVQWMAVFKDRLCVGYPSGFSLLS
 IQGDGPPDLVNPTDPSLAFLSQQSFDALCAVELKSEEYLLCF SHMGLYVDPQGRSRMQELMWPAAAPVA
 CSCSPHTVTVYSEYGVDFVDRTEWVQTI GLRRIRPLNSDGSLLNLGCEPRLIYFKNKFSGTILNVPD
 TSDNSKKQMLRTRSKRRFVFKVPEEERLQQRREMLRDPPELRSKMI SNPTNFNHVAMGPGDGMQVLM DLP
 LSAAPTQEEKQGPTPAGLPRQPPSRSKPYVSWPSSGGSEPGVPVPLRSMSPDPQDFDKEPDSSTKHST
 PSNSSNPSPNSPHRSQPLMEGLDQPSCDA

TRTRPLE - GFP Tag - V

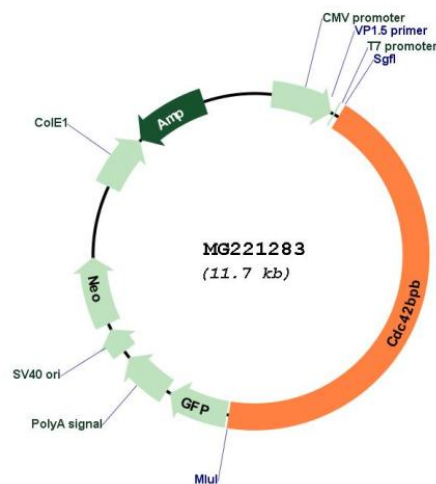
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_183016

ORF Size: 5139 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_183016.2](#), [NP_898837.2](#)

RefSeq Size: 6718 bp

RefSeq ORF: 5142 bp

Locus ID: 217866

UniProt ID: [Q7TT50](#)

Cytogenetics: 12 60.94 cM

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 LURAP1, is involved in modulating lamellar actomyosin retrograde flow that is crucial to cell protrusion and migration. Phosphorylates PPP1R12A (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]