

## Product datasheet for **MG208331**

### **Rcc2 (BC086666) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Rcc2 (BC086666) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Rcc2
Synonyms:	mKIAA1470, Td60
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG208331 representing BC086666  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCAGGAAGAAGGGGGCGCCTGGGAGGAGCCGAGTTCGGGCAACGGCACGGCGCGCGGGGCCCC  
 GCGCAGCGGGCGGCCCGCGGGCAGGAAGCGCAGCGGCCCGAGCGCTGCAGCAGCAGCAGCGGGCGCGG  
 CAGCAGCGGGCAGCAGGACGGCCCGGAGCTGGACGGGGCCCCGCGCGGCAAGCGCACAGCCAGGCCG  
 GCGACGGCGGGCAAGGGCGCGCGCGCCGCGATCATCACGGAGCCGAGCACAGCAAGGAGCGCGTCA  
 AACTTGAAGGGTCTAAGTGCAAAGGGCAGCTTTTGATTTTGGGGCAACCACTGGGACTTGATTGGACG  
 GAAGGAAGTGCCTAAACAGCAAGCTGCGTACCGCAACCTTGGTCAGAATTTGGGGGCCCATAGGTAT  
 GGGTGCCTGT CAGGAGTCCGGGTGCGAACCGTGGTTTCAGGCTCATGTGCTGCCACAGCCTCCTCATCA  
 CCACAGAAGGGAAGCTGTGGAGCTGGGGTGGGAATGAGAAGGGGAGCTGGGCCATGGTGATACCAAGAG  
 GGTGGAAGCCCCAGACTCATCGAGGCCCTCAGCCATGAGGCAATCGTGCTGGCAGCCTGTGGGCGCAAC  
 CACACCCTGGCCTTGACAGATACTGGATCAGTGTTCCTTCGGAGAGAAATAAAATGGGGCAGCTGGGTC  
 TCGGGAACCAGACAGATGCCGTCCAAGTCTGCTCAGATAATGTACAACGGGCAGCCAATCACCAAGAT  
 GCCTGCGGGGCGAGTTCAGCATGCTGATGGACTGTAAGGAAACCTCTACTCCTTTGGGTGCCCTGAG  
 TATGGCCAGCTGGGGCACAACCTCAGATGGCAAGTTCATCGCCCGGGCGCAGAGGATAGAATATGATTGTG  
 AGCTGGTGCCCGCAGAGTGGCCATCTTCATCGAGAAGACCAAGGACGGGAGATCTTACCTGTCCCAA  
 CGTGGTGGTTCGAGATGTAGCCTGTGGCGCTAACACACACTGGTCTGGACTCTCAGAAGCGAGTGTTC  
 TCCTGGGGCTTTGGTGGCTATGGCCGGCTGGGCCATCCGAGCAGAAGGATGAGATGGTGCCTCGCTGG  
 TGAAGCTGTTGACTTCCCGGGCGTGGTGCAACCCAGATCTATGCCGGCTACACCTGCTCCTTCGCTGT  
 CAGTGAAGTGGGTGGCTGTTTTCTGGGGGCCACCAATACCTCCCGAGAGTCTACCATGTACCCGGAAG  
 GCAGTGCAGGACCTCTGCGGCTGGCGGATCCGGAGCCTTGCCTGCGGGAAGAGCAGCATCATCGTAGCTG  
 CGGACGAGAGTACTATCAGTTGGGGTCCATCGCCAACCTTCGGGGAATTGGGGTATGGGGACCACAAGCC  
 CAAGTCTTCTACTGCGGCCAGGAGGTGAAGACTCTGGATGGCATCTTCTCCGAACAGGTGGCCATGGG  
 TATTCACACTCCTTGGTATAGCGCGAGACGAGAGCGAGGCTGAGAAGGAGAAGCTGCAGAGGCTACCTG  
 AGTACACCCCGCGCACCTC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

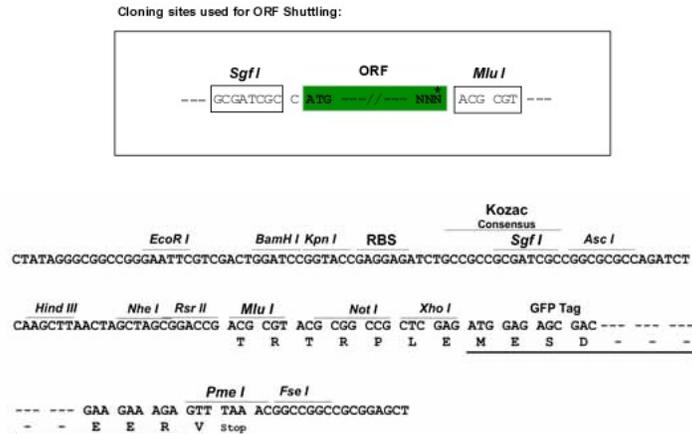
>MG208331 representing BC086666  
 Red=Cloning site Green=Tags(s)

MPRKKGAWEEPSSNGTARAGPRRRGGPAGRKRRPERCSSSSGGSSGDEDPPELDGAPGGGKRTARP  
 ATAGKAAGAAAIIITEPEHTKERVKLEGSCKGQLLIFGATNWDLIGRKEVPKQQAAYRNLGQNLWGP  
 HRYGCLSGVRVRTVVS GSCAAHSLITTEGKLWSWRNEKGQLGHGDTKRVEAPRLIEALSHEAIVL  
 AACGRNHTLALD TDGVSVFAFGENKMGQLGLGNQTD AVPSPAQIMYNGQPITKMACGAEF SML  
 MDCKNLYSFGCE YGQLGHNSDGKFIARAQRIEYDCELVPRRVAIFIEKTKDQILPVPNVV  
 VRDVACGANHTLVLD SQKRVF SWFGG YGRLGHAEQKDEMVPRLVKLDFPGRGATQIYAGY  
 TCSFVSEVGG LFFWGATNTSRESTMYPK AVQDL CGWRIRSLACGKSSIIVADESTISWGP  
 SPTFGELGYGDH KPSSTAAQEVKTL DGI FSEQVAMG YSHSLVIARDESEAEKEKLQRL  
 PEYTPRTL

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** BC086666

**ORF Size:** 1560 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.

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

**RefSeq:** [BC086666](#), [AAH86666](#)

**RefSeq Size:** 1976 bp

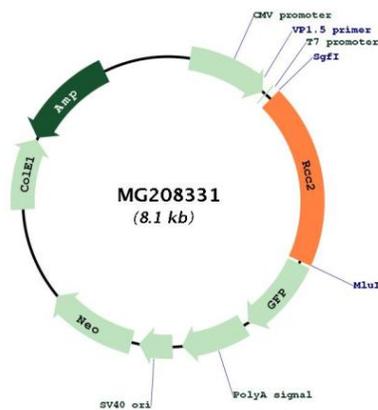
**RefSeq ORF:** 1562 bp

**Locus ID:** 108911

Cytogenetics: 4 D3

**Gene Summary:** Multifunctional protein that may effect its functions by regulating the activity of small GTPases, such as RAC1 and RALA. Required for normal progress through the cell cycle, both during interphase and during mitosis. Required for the presence of normal levels of MAD2L1, AURKB and BIRC5 on inner centromeres during mitosis, and for normal attachment of kinetochores to mitotic spindles. Required for normal organization of the microtubule cytoskeleton in interphase cells. Functions as guanine nucleotide exchange factor (GEF) for RALA. Interferes with the activation of RAC1 by guanine nucleotide exchange factors (By similarity). Prevents accumulation of active, GTP-bound RAC1, and suppresses RAC1-mediated reorganization of the actin cytoskeleton and formation of membrane protrusions (PubMed:25074804). Required for normal cellular responses to contacts with the extracellular matrix of adjacent cells, and for directional cell migration in response to a fibronectin gradient (in vitro) (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG208331