

## Product datasheet for **RG211359**

### **RIC8 (RIC8A) (NM\_021932) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RIC8 (RIC8A) (NM_021932) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RIC8
Synonyms:	RIC8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG211359 representing NM\_021932.  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGGATCGCC
ATGGAGCCCCGGGCGGTTGCAGAAGCCGTGGAGACGGGTGAGGAGGATGTGATTATGGAAGCTCTGCGG
TCATACAACAGGAGCACTCCAGAGCTTACGTTTGTATGATGCCAACAGGAGGACCGGAAGAGACTG
GCGGAGCTGCTGGTCTCGTCTCGTCTGGAACAGGGCTTCCACCCTCCACCCTGTCACTCGCTGCAGAGT
GTCCGAATCCTGTCCCGGACCGCAACTGCCTGGACCCGTTACCAGCCGCCAGAGCCTGCAGGCACTA
GCCTGCTATGCTGACATCTGTCTCTGAGGGTCCGTCCAGAGTCCGCAGACATGGATGTTGTACTG
GAGTCCCTCAAGTGCCTGTGCAACCTCGTCTCAGCAGCCCTGTGGCACAGATGCTGGCAGCAGAGGCC
CGCCTAGTGGTGAAGCTCACAGAGCGTGTGGGGCTGTACCGTGAGAGGAGCTTCCCCACGATGTCCAG
TTCTTTGACTTGGGCTCCTTCTCTGCTAACGGCACTCCGCACCGATGTGCGCCAGCAGCTGTTTCAG
GAGCTGAAAGGAGTGCCTGCTAACTGACACACTGGAGCTGACGCTGGGGTGACTCCTGAAGGGAAC
CCCCACCCACGCTCCTTCTTCCCAAGAGACTGAGCGGGCCATGGAGATCCTCAAAGTGTCTTCAAC
ATACCCTGGACTCCATCAAGGGGGAGGTGGACGAGGAAGACGCTGCCCTTACCAGACCTGGGGACC
TTCTCCGGCACTGTGTGATGATCGCTACTGCTGGAGACCGCACAGAGGATTCAGGGCCACGCAGTG
AACCTCCTGGGAACTTGCCCTCAAGTGTCTGGATGTTCTCCTACCCTGGAGCCATGGAGACTCC
ACGGAGTTCATGGGAGTGAATATGGATGTGATTCGTGCCCTCCTCATCTTCTAGAGAAGCGTTGCAC
AAGACACACAGGCTGAAGGAGAGTGTAGCTCCCGTGTGAGCGTGTGACTGAATGTGCCCGGATGCAC
CGCCAGCCAGGAAGTTCCTGAAGGCCAGGATGGCCACCTCCCAGGTGCTGCCCCCTCGCGGGAT
GTGAGGACACGGCCTGAGGTTGGGAGATGCTGCGGAACAAGCTGTCCGCCTCATGACACACCTGGAC
ACAGATGTAAGAGGGTGGCTGCCGAGTCTTGTGTTGCTGTGCTGTGAGAGTGTGCCCGATTATC
AAGTACACAGGCTATGGGAATGCTGCTGGCCTTCTGGCTGCCAGGGCCCTCATGGCAGGAGCCGGCCC
GAGGGCCAGTACTCAGAGGATGAGGACACAGACAGATGAGTACAAGGAAGCCAAAGCCAGCATAAAC
CCTGTGACCGGGAGGTTGGAGGAGAAGCCGCTAACCTATGGAGGGCATGACAGAGGAGCAGAAGGAG
CACGAGGCCATGAAGCTGGTACCATGTTTGACAAGCTCTCCAGGAACAGAGTATCCAGCCAATGGGG
ATGAGTCCCCGGGTATCTTACGTCCCTGCAGGATGCCATGTGCGAGACTATGGAGCAGCAGCTCTCC
TCGGACCCTGACTCGGACCCTGAC
ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTAAAC
```

**Protein Sequence:**

>Peptide sequence encoded by RG211359  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
MEPRAVAEAVETGEEDVIMEALRSYNQEHSQSFTFDDAQQEDRKRLAELLVSVLEQGLPPSHRVIWLQS
VRILSRDRNCLDPFTSRQSLQALACYADISVSEGSVPESADMDVVLESLKCLCNLVLSSPVAQMLAAEA
RLVVKLTERVGLYRERSFPHDVQFFDLRLLFLLTALRTDVRQQLFQELKGVRLTDTLELTLGVTPEGN
PPPTLLPSQETERAMEILKVLFNITLDSIKGEVDEEDAALYRHLGTLRHCVMIAATAGDRTEEFQGHAV
NLLGNLPLKCLDVLLTLEPHGDSTEFMGVNMVDVIRALLIFLEKRLHKTHRLKESVAPVLSVLTFCARMH
RPARKFLKAQGWPPPQVLPPLRDVTRPEVGEMLRNKLVRLMTHLDTDKRVAAEFLVLCSESVPRFI
KYTYGNAAGLLAARGLMAGGRPEGQYSEDEDTDDEYKEAKASINPVTGRVEEKPPNPMEGMTEEQKE
HEAMKLVTFDKLSRNRVIQPMGMSPRGHLTSLQDAMCETMEQQLSSDPDSDPD
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV
MGYGFYHFGTYPSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNAIVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_021932

**ORF Size:** 1611 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 Size:** 2714 bp

**RefSeq ORF:** 1614 bp

**Locus ID:** 60626

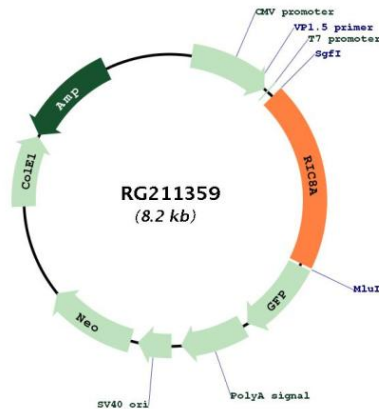
**UniProt ID:** [Q9NPO8](#)

**Cytogenetics:** 11p15.5

**MW:** 60.4 kDa

**Gene Summary:** Guanine nucleotide exchange factor (GEF), which can activate some, but not all, G-alpha proteins. Able to activate GNAI1, GNAO1 and GNAQ, but not GNAS by exchanging bound GDP for free GTP. Involved in regulation of microtubule pulling forces during mitotic movement of chromosomes by stimulating G(i)-alpha protein, possibly leading to release G(i)-alpha-GTP and NuMA proteins from the NuMA-GPSM2-G(i)-alpha-GDP complex (By similarity). Also acts as an activator for G(q)-alpha (GNAQ) protein by enhancing the G(q)-coupled receptor-mediated ERK activation.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for RG211359