

## Product datasheet for **RG203973**

### **RAB3A (NM\_002866) Human Tagged ORF Clone**

#### Product data:

Product Type: Expression Plasmids  
Product Name: RAB3A (NM\_002866) Human Tagged ORF Clone  
Tag: TurboGFP  
Symbol: RAB3A  
Mammalian Cell Selection: Neomycin  
Vector: pCMV6-AC-GFP (PS100010)  
E. coli Selection: Ampicillin (100 ug/mL)  
ORF Nucleotide Sequence: >RG203973 representing NM\_002866  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCATCCGCCACAGACTCGCGCTATGGGCAGAAGGAGTCCCTCGGATCAGAACTTCGACTACATGTTCA  
AGATTCTCATCATCGGCAACAGCAGCGTGGGCAAGACGTCCTTCTCCTTCCGCTATGCTGACGACTCGTT  
CACGCCTGCCTTCGTGACACCGTGGGCATCGACTCAAGGTCAAGACCATCTATCGCAACGACAAGAGG  
ATCAAGTCGAGATCTGGGACACAGCAGGGCAAGAGCGGTACCGGACCATCACCACCGCATACTACCGGG  
CGCTATGGGCTTCATCCTCATGTATGACATCACCAACGAGGAATCCTTCAATGCAGTGCAGGACTGGTC  
CACCCAGATCAAGACCTACTCATGGGACAATGCCAGGTGCTGCTGGTAGGAAACAAGTGTGACATGGAG  
GATGAGCGGGTGGTGTATCAGAACGTGGCCGGCAGCTAGCTGACCACCTTGGGTTTCGAGTCTTTGAGG  
CAAGCGCCAAGGACAACATTAACGTCAAGCAGACCTTTGAGCGCCTGGTGGATGTCATCTGCGAGAAGAT  
GTCCGAGTCGTTGGACACGGCGGACCCTGCGGTACAGGCGCCAAGCAGGGCCACAGCTCAGTGACCAG  
CAGGTGCCACCGCACCAGGACTGCGCCTGC

**ACGCGT**ACGCGGCCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG203973 representing NM\_002866  
Red=Cloning site Green=Tags(s)

MASATDSRYGQKESSDQNFDMFKILIIIGNSSVGKTSFLFRYADDSFTPAFVSTVGIDFKVKTIYRNDKR  
IKLQIWDTAGQERYRTITTAYYRGAMGFILMYDITNEESFNAVQDWSTQIKTYSWDNAQVLLVGNKCDME  
DERVVSSERGRQLADHLGFEFFEASAKDNINVKQTFERLVDVICEKMSSESLDTADPAVTGAKQGPQLSDQ  
QVPPHQDCAC

**TRTRPLE** - GFP Tag - V

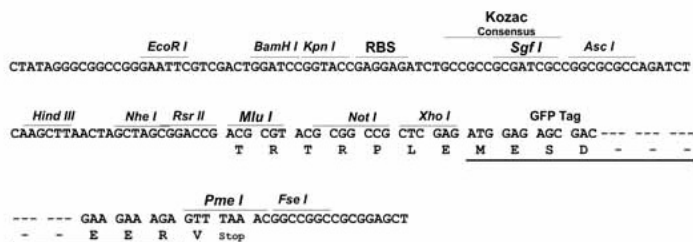
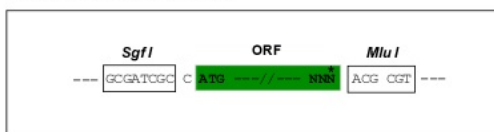


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Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM\_002866

ORF Size: 660 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\\_002866.5](#)

RefSeq Size: 1491 bp

RefSeq ORF: 663 bp

Locus ID: 5864

UniProt ID: [P20336](#)

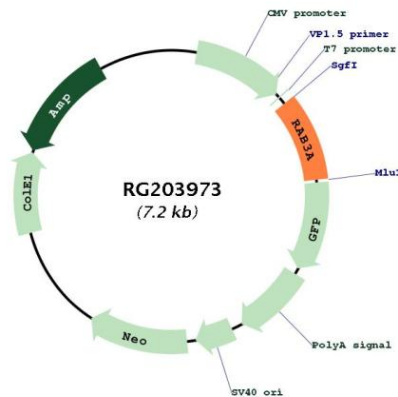
**Cytogenetics:** 19p13.11

**Domains:** ras, RAN, RAS, RHO, RAB

**Protein Families:** Druggable Genome

**Gene Summary:** Small GTP-binding protein that plays a central role in regulated exocytosis and secretion. Controls the recruitment, tethering and docking of secretory vesicles to the plasma membrane (By similarity). Upon stimulation, switches to its active GTP-bound form, cycles to vesicles and recruits effectors such as RIMS1, RIMS2, Rabphilin-3A/RPH3A, RPH3AL or SYTL4 to help the docking of vesicles onto the plasma membrane (By similarity). Upon GTP hydrolysis by GTPase-activating protein, dissociates from the vesicle membrane allowing the exocytosis to proceed (By similarity). Stimulates insulin secretion through interaction with RIMS2 or RPH3AL effectors in pancreatic beta cells (By similarity). Regulates calcium-dependent lysosome exocytosis and plasma membrane repair (PMR) via the interaction with 2 effectors, SYTL4 and myosin-9/MYH9 (PubMed:27325790). Acts as a positive regulator of acrosome content secretion in sperm cells by interacting with RIMS1 (PubMed:22248876, PubMed:30599141). Plays also a role in the regulation of dopamine release by interacting with synaptotagmin I/SYT (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for RG203973