

Product datasheet for **RG236522**

Rab5 (RAB5A) (NM_001292048) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Rab5 (RAB5A) (NM_001292048) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: RAB5A
Synonyms: RAB5
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG236522 representing NM_001292048.
Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTGTAGTAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCTAGTCGAGGCGCAACAAGACCCAAACGGGCCAAATACGGGAAATAAAATATGCCAGTTCAAACTA
GTACTTCTGGGAGAGTCCGCTGTTGGCAAATCAAGCCTAGTGCTTCGTTTTGTGAAAGGCCAATTTTCAT
GAATTTCAAGAGAGTACCATTGGGGTAAAGTTTGAATATGGGATACAGCTGGTCAAGAACGATACCAT
AGCCTAGCACCAATGTACTACAGAGGAGCACAAGCAGCCATAGTTGTATATGATATCACAAATGAGGAG
TCCTTTGCAAGAGCAAAAAATTGGGTTAAAGAACTTCAGAGGCAAGCAAGTCCTAACATTGTAATAGCT
TTATCGGGAAACAAGGCCGACCTAGCAAATAAAGAGCAGTAGATTTCCAGGAAGCACAGTCCTATGCA
GATGACAATAGTTTATTATTCATGGAGACATCCGCTAAAACATCAATGAATGTAATGAAATATTTCATG
GCAATAGCTAAAAAATTGCCAAAGAATGAACCACAAAAATCCAGGAGCAAAATTCGCCAGAGGAAGAGGA
GTAGACCTTACCGAACCCACACAACCAACCAGGAATCAGTGTGTAGTAAC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```

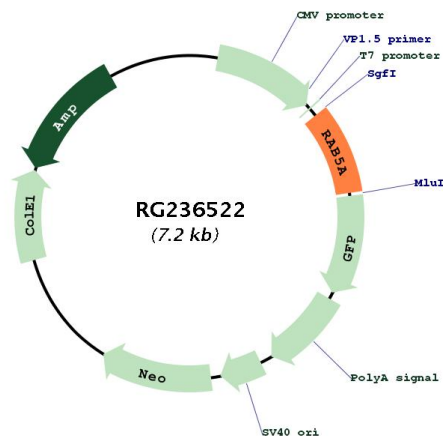
Protein Sequence: >Peptide sequence encoded by RG236522
Blue=ORF Red=Cloning site Green=Tag(s)

```
MASRGATRPNGPNTGNKICQFKLVLLGESAVGKSSLVLRVFKGQFHEFQESTIGVKFEIWDTAGQERYH
SLAPMYRGAQAAIVVYDITNEESFARAKNWKELQRQASPNIVIALSGNKADLANKRAVDFQEAQSYA
DDNSLLFMETSAKTSMNVNEIFMAIAKLLPKNEPQNPGANSARGRGVDL TEPTQPTRNQCCSN
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
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Restriction Sites: Sgfl-MluI



Cloning Scheme:

Plasmid Map:


ACCN: NM_001292048

ORF Size: 603 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).

RefSeq:	<u>NM_001292048.1, NP_001278977.1</u>
RefSeq Size:	2506 bp
RefSeq ORF:	606 bp
Locus ID:	5868
UniProt ID:	<u>P20339</u>
Cytogenetics:	3p24.3
Protein Families:	Druggable Genome
Protein Pathways:	Amyotrophic lateral sclerosis (ALS), Endocytosis
MW:	22.6 kDa
Gene Summary:	<p>The small GTPases Rab are key regulators of intracellular membrane trafficking, from the formation of transport vesicles to their fusion with membranes. Rabs cycle between an inactive GDP-bound form and an active GTP-bound form that is able to recruit to membranes different sets of downstream effectors directly responsible for vesicle formation, movement, tethering and fusion. RAB5A is required for the fusion of plasma membranes and early endosomes (PubMed:10818110, PubMed:14617813, PubMed:16410077, PubMed:15378032). Contributes to the regulation of filopodia extension (PubMed:14978216). Required for the exosomal release of SDCBP, CD63, PDCD6IP and syndecan (PubMed:22660413). Regulates maturation of apoptotic cell-containing phagosomes, probably downstream of DYN2 and PIK3C3 (By similarity).[UniProtKB/Swiss-Prot Function]</p>