

Product datasheet for **MG202024**

Rab10 (NM_016676) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Rab10 (NM_016676) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Rab10
Synonyms: AW107754
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG202024 representing NM_016676
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGAAGAAGACGTACGACCTGCTTTTCAAGCTGCTCCTGATCGGGGACTCGGGAGTGGGCAAGACCT
GCGTCCTTTTTCGTTTTTCGGACGATGCCTTCAATACCACCTTTATTTCCACCATAGGAATAGACTTTAA
GATCAAAACAGTGGAACTACAAGGAAAGAAGATCAAGCTACAGATATGGGACACAGCAGGCCAGGAGCGA
TTTCACACCATCACAACCTCCTACTACAGAGGAGCAATGGGCATCATGCTAGTGTATGACATCACCACCG
GTAAAAGCTTTGAGAATCAGCAAGTGGCTTAGAAACATAGATGAGCATGCCAATGAAGATGTGAAAG
AATGTTACTAGGGAACAAGTGTGACATGGACGACAAGAGAGTTGTACCGAAAGGCAAGGAGAACAGATT
GCAAGGGAGCATGGTATTAGTTTTTGTAGACTAGTGCAAAAGCAAATATAAACATCGAAAAGCGTTCC
TCACATTAGCTGAAGACATCCTCCGAAAGACCCCTGTAAAAGAACCCAACAGTAAAACGTAGATATCAG
CAGTGGAGGAGCGTGACGGGCTGGAAGAGCAAGTGTCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG202024 representing NM_016676
Red=Cloning site Green=Tags(s)

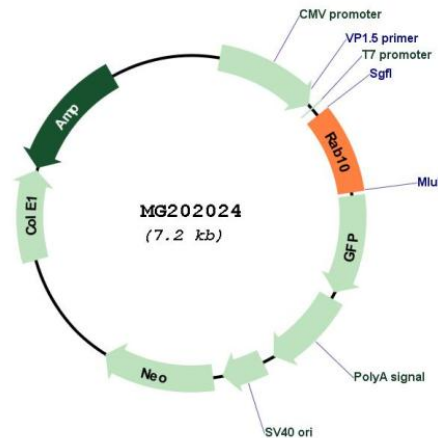
MAKKTYDLLFKLLLIGDSGVGKTCVLFRRSDDAFNTTFFISTIGIDFKIKTVLQGGKIKLQIWDTAGQER
FHTITTSYYRGAMGIMLVYDITNGKSFENISKWLRNIDEHANEDVERMLLGNKCDMDDKRVVPGKGEQI
AREHGIRFFETSAKANINIEKAFLLAEDILRKTPVKEPNSENVDISSGGVVTGWKSKCC

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI



Cloning Scheme:

Plasmid Map:


ACCN: NM_016676

ORF Size: 600 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_016676.5](#)

RefSeq Size: 3477 bp

RefSeq ORF: 603 bp

Locus ID: 19325

UniProt ID: [P61027](#)

Cytogenetics: 12 1.71 cM

Gene Summary: 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 set of downstream effectors directly responsible for vesicle formation, movement, tethering and fusion (By similarity). That Rab is mainly involved in the biosynthetic transport of proteins from the Golgi to the plasma membrane. Regulates, for instance, SLC2A4/GLUT4 glucose transporter-enriched vesicles delivery to the plasma membrane. In parallel, it regulates the transport of TLR4, a toll-like receptor to the plasma membrane and therefore may be important for innate immune response. Plays also a specific role in asymmetric protein transport to the plasma membrane within the polarized neuron and epithelial cells. In neurons, it is involved in axonogenesis through regulation of vesicular membrane trafficking toward the axonal plasma membrane while in epithelial cells, it regulates transport from the Golgi to the basolateral membrane. Moreover, may play a role in the basolateral recycling pathway and in phagosome maturation. Finally, may play a role in endoplasmic reticulum dynamics and morphology controlling tubulation along microtubules and tubules fusion. [UniProtKB/Swiss-Prot Function]