

## Product datasheet for MR202355

### Rab5a (NM\_025887) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Rab5a (NM_025887) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rab5a
Synonyms:	2410015H04Rik; AI663973; AU021172; nnyRab5a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR202355 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTAATCGAGGAGCAACAAGACCCAACGGGCCAAATACTGGAATAAAATATGCCAGTTCAACTGG  
TCCTTCTAGGAGAGTCTGCTGTTGGCAAATCAAGCCTGGTTCTTCGCTTTGTGAAAGGCCAATTTTCATGA  
ATTTCAAGAGAGTACCATTGGGGCTGCCTTTCTAACCCAACTGTGTCTTGATGACACAACAGTAAAA  
TTTGAAATATGGGATACAGCTGGTCAAGAACGGTATCATAGCTTAGCACCAATGTACTACCGAGGAGCAC  
AAGCAGCCATAGTTGTGTATGATATCACAAATGAGGAATCCTTTGCGAGAGCAAAAACTGGGTTAAGA  
ACTTCAAAGGCAAGCAAGTCCTAATATTGTGATAGCTTTGTGAGAAACAAGCTGACTTAGCAAATAAA  
AGAGCTGTTGACTTCCAGGAAGCACAGTCTATGCAGATGACAACAGCTTATTATTTATGGAGACATCAG  
CTAAGACATCAATGAATGTAAATGAAATATTTATGGCAATAGCTAAAAAGCTGCCAAAGAATGAACCACA  
GAATCCTGGTGCAAACTCAGCCAGAGGACGAGGAGTAGACCTTACTGAGCCTGCACAGCCAGCCAGAAGC  
CAGTGTGTAGTAAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR202355 protein sequence  
 Red=Cloning site Green=Tags(s)

MANRGATRPNGPNTGNKICQFKLVLLGESAVGKSSLVLRVFKGQFHEFQESTIGAAFLTQTVCLDDTTVK  
 FEIWDTAGQERYHSLAPMYRGAQAAIVVYDITNEESFARAKNWKELQRQASPNIVIALSGNKADLANK  
 RAVDFQEAQSYADDNLLFMETSAKTSMNVNEIFMAIAKKLPKNEPQNPNGANSARGRGVDLTEPAQFARS  
 QCCSN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_025887

**ORF Size:** 648 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\\_025887.4](#), [NP\\_080163.1](#)

**RefSeq Size:** 2364 bp

**RefSeq ORF:** 648 bp

**Locus ID:** 271457

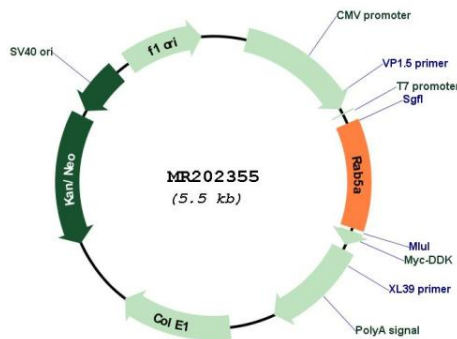
**UniProt ID:** [Q9CQD1](#)

**Cytogenetics:** 17 27.82 cM

**MW:** 23.6 kDa

**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 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. Contributes to the regulation of filopodia extension. Required for the exosomal release of SDCBP, CD63, PDCD6IP and syndecan (By similarity). Regulates maturation of apoptotic cell-containing phagosomes, probably downstream of DYN2 and PIK3C3 (PubMed:18425118).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR202355