

Product datasheet for **MR200938**

Rab3a (BC018451) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Rab3a (BC018451) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Rab3a
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >MR200938 representing BC018451
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTTCGCCACAGACTCTCGCTATGGGCAGAAGGAGTCTCAGACCAGAACTTCGACTATATGTTCA
AGATCCTGATCATTGGGAACAGCAGCGTGGGCAAAACCTCGTTCCTCTCCGCTACGCAGATGACTCCTT
CACTCCAGCCTTTGTGAGCACCCTGGCATAGACTTCAAGGTCAAACCATCTACCGCAACGACAAGAGG
ATCAGTGCAGATCTGGGTGTGTAGGGCTGGAGGGAGATGTCTTCTGCCAACCCACAAAAGGAAGC
TGAGGCTAGCCATCGGCTGGCGCTGGGATTTAAGGCTGCATCTCCATCCAGTATGAGCTTCCCGTTTT
CCTAAGTCCCAGCATCCCCTCATCTTAGCATAGTGGCAGAGGCATTCAGGCAGCACCCAGTA
CATGTTTGT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR200938 representing BC018451
Red=Cloning site Green=Tags(s)

MASATDSRYGQKESDQNFDMFKILIIIGNSSVGKTSFLFRYADDSFTPAFVSTVGDVFKVKTIIYRNDKR
ISCRSGCVGLEGRCLPANPHKRKLRLAIGWRWDLRPASPSQYELPVFLSPEHPHSSSSIVWHRAFRQHPV
HVC

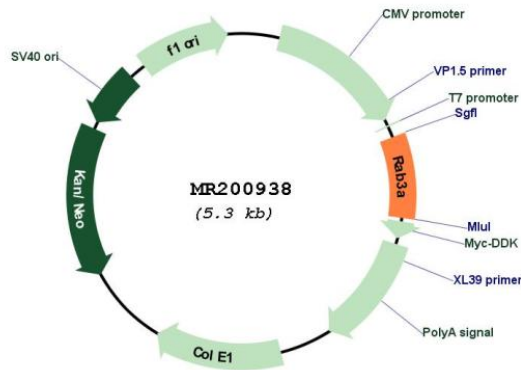
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI



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Cloning Scheme:

Plasmid Map:


ACCN: BC018451

ORF Size: 429 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:	<ol style="list-style-type: none">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:	BC018451.1
RefSeq Size:	3157 bp
RefSeq ORF:	431 bp
Locus ID:	19339
Cytogenetics:	8 34.15 cM
MW:	115.7 kDa
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 (PubMed:11598194). 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 isoform RIMS2 and RPH3AL effectors in pancreatic beta cells (PubMed:15159548, PubMed:20674857). Regulates calcium-dependent lysosome exocytosis and plasma membrane repair (PMR) via the interaction with 2 effectors, SYTL4 and myosin-9/MYH9 (By similarity). Acts as a positive regulator of acrosome content secretion in sperm cells by interacting with RIMS1 (By similarity). Plays a role in the regulation of dopamine release by interacting with synaptotagmin I/SYT (By similarity).[UniProtKB/Swiss-Prot Function]