

Product datasheet for MC226301

Rab7 (NM_001293652) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rab7 (NM_001293652) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rab7
Synonyms:	Rab7a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC226301 representing NM_001293652

Red=Cloning site Blue=ORF Orange=Stop codon

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGACCTCTAGGAAGAAAGTGTGCTGAAGGTCATCATCCTGGGGGACTCTGGTGTGGAAAGACCTCTC
TCATGAACCAAGTATGTGAACAAGAAGTTCAGTAACCAAGTACAAAGCCACAATAGGAGCGGACTTTCTGAC
CAAGGAGGTGATGGTGGACGACAGACTTGTACCATGCAGATCTGGGACACAGCCGGTCAAGAACGGTTC
CAGTCTCTTGGTGTGGCCTTCTACAGAGGTGCAGATTGCTGTGTTCTGGTGTGGTGTGATGTGACTGCCCA
ACACTTTCAAACCTCGACAGCTGGAGAGACGAGTTTCTCATCCAGGCCAGCCCCGGGATCCCGAGAA
CTTCCCTTTTGTGTGTTGGGAAACAAGATTGACCTGGAAAACAGACAAGTGGCCACAAAGAGGGCACAG
GCTTGGTGCTACAGCAAAAAACAATTCCTTACTTCGAGACCAAGTGCACAGGAGGCCATCAATGTGGAGC
AGGCCTTCCAGACAATTGCTCGGAATGCCCTTAACAGGAAACAGAAGTGGAACTGTACAATGAATTCCTC
TGAACCCATCAAAGTGGACAAGAATGACCGGGCCAAGGCCTCCGCAGAAAGCTGCAGTTGTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	Sgfl-MluI
ACCN:	NM_001293652
Insert Size:	624 bp


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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_001293652.1</u> , <u>NP_001280581.1</u>
RefSeq Size:	2395 bp
RefSeq ORF:	624 bp
Locus ID:	19349
UniProt ID:	<u>P51150</u>
Cytogenetics:	6 39.13 cM

Gene Summary:

Key regulator in endo-lysosomal trafficking. Governs early-to-late endosomal maturation, microtubule minus-end as well as plus-end directed endosomal migration and positioning, and endosome-lysosome transport through different protein-protein interaction cascades. Plays a central role, not only in endosomal traffic, but also in many other cellular and physiological events, such as growth-factor-mediated cell signaling, nutrient-transporter mediated nutrient uptake, neurotrophin transport in the axons of neurons and lipid metabolism. Also involved in regulation of some specialized endosomal membrane trafficking, such as maturation of melanosomes, pathogen-induced phagosomes (or vacuoles) and autophagosomes. Plays a role in the maturation and acidification of phagosomes that engulf pathogens, such as *S.aureus* and *Mycobacteria*. Plays a role in the fusion of phagosomes with lysosomes. Plays important roles in microbial pathogen infection and survival, as well as in participating in the life cycle of viruses. Microbial pathogens possess survival strategies governed by RAB7A, sometimes by employing RAB7A function (e.g. *Salmonella*) and sometimes by excluding RAB7A function (e.g. *Mycobacterium*). In concert with RAC1, plays a role in regulating the formation of RBs (ruffled borders) in osteoclasts. Controls the endosomal trafficking and neurite outgrowth signaling of NTRK1/TRKA. Regulates the endocytic trafficking of the EGF-EGFR complex by regulating its lysosomal degradation (By similarity). Involved in the ADRB2-stimulated lipolysis through lipophagy, a cytosolic lipase-independent autophagic pathway (PubMed:23708524). Required for the exosomal release of SDCBP, CD63 and syndecan (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longest transcript. Variants 1, 2, 3, 4, and 5 encode the same protein.