

Product datasheet for MC207372

Rab7 (NM_009005) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids

Product Name: Rab7 (NM_009005) Mouse Untagged Clone

Tag: Tag Free

Symbol: Rab7

Synonyms: Rab7a

Mammalian Cell Neomycin

Selection:

Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)

Fully Sequenced ORF: >MC207372 representing NM_009005

Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC

GCCGCGATCGCC

ATGACCTCTAGGAAGAAAGTGTTGCTGAAGGTCATCATCCTGGGGGACTCTGGTGTTGGAAAGACCTCTC
TCATGAACCAGTATGTGAACAAGAAGTTCAGTAACCAGTACAAAAGCCACAATAGGAGCGGACTTTCTGAC
CAAGGAGGTGATGGTGGACGACAGACTTGTTACCATGCAGATCTGGGACACAGCCGGTCAAGAACGGTTC
CAGTCTCTTGGTGTGGCCTTCTACAGAGGTGCAGATTGCTGTTTCTGGTGTTTGATGTGACTGCCCCCA
ACACTTTCAAAACCCTCGACAGCTGGAGAGACGAGTTTCTCATCCAGGCCAGCCCCCGGGATCCCGAGAA
CTTCCCTTTTGTTGTGTGGGAAACAAGATTGACCTGGAAAACAGACAAGTGGCCACAAAGAGGGCACAG
GCTTGGTGCTACAGCAAAAACAACATTCCTTACTTCGAGACCAGTGCCAAGGAGGCCATCAATGTGGAGC
AGGCCTTCCAGACAATTGCTCGGAATGCCCTTAAACAGGAAACAGAAGTGGAACTGTACAATGAATTCCC
TGAACCCATCAAACTGGACAAGAATGACCGGGCCAAGGCCTCCGCAGAAAGCTGCAGTTGTTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT

ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul ACCN: NM 009005

Insert Size: 624 bp



OriGene Technologies, Inc. 9620 Medical Center Drive, Ste 200

CN: techsupport@origene.cn

Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com ORÏGENE

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).

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.

RefSeg: NM 009005.3, NP 033031.2

RefSeq Size: 2173 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-transportor 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 (2) differs in the 5' UTR, compared to variant 1. Variants 1, 2, 3, 4, and 5 encode the same protein.