

Product datasheet for **RC203873**

Rab5 (RAB5A) (NM_004162) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rab5 (RAB5A) (NM_004162) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rab5
Synonyms:	RAB5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203873 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTAGTCGAGGCGCAACAAGACCCAACGGGCCAAATACTGGAATAAAAATGCCAGTTCAACTAG
TACTTCTGGGAGAGTCCGCTGTTGGCAAATCAAGCCTAGTGCTTCGTTTTGTGAAAGGCCAATTTTCATGA
ATTTCAAGAGAGTACCATTGGGGCTGCTTTTCTAACCCAACTGTATGTCTTGATGACACTACAGTAAAG
TTTGAAATATGGGATACAGCTGGTCAAGAACGATACCATAGCCTAGCACCAATGTACTACAGAGGAGCAC
AAGCAGCCATAGTTGTATATGATATCACAAATGAGGAGTCCTTTGCAAGAGCAAAAAATTGGGTTAAGA
ACTTCAGAGGCAAGCAAGTCCTAACATTGTAATAGCTTTATCGGGAAACAAGGCCGACCTAGCAAATAAA
AGAGCAGTAGATTTCCAGGAAGCACAGTCCTATGCAGATGACAATAGTTTATTATTTCATGGAGACATCCG
CTAAAACATCAATGAATGTAAATGAAATATTCATGGCAATAGCTAAAAAATTGCCAAAGAATGAACCACA
AAATCCAGGAGCAAATTCGCCAGAGGAAGAGGAGTAGACCTTACCGAACCCACACAACCAACCAGGAAT
CAGTGTGTAGTAAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC203873 protein sequence
Red=Cloning site Green=Tags(s)

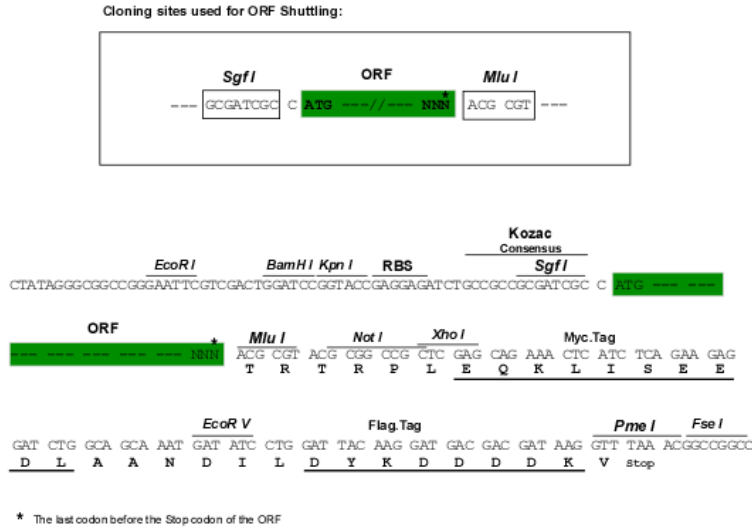
MASRGATRPNGPNTGNKICQFKLVLLGESAVGKSSLVLRVFKGQFHEFQESTIGAAFLTQTVCLEDDTTVK
 FEIWDTAGQERYHSLAPMYRGAQAAIVVYDITNEESFARAKNWKELQRQASPNIVIALSGNKADLANK
 RAVDFQEAQSYADDNLLFMETSAKTSMNVNEIFMAIAKKLPKNEPQNPNGANSARGRGVDLLEPTQPTRN
 QCCSN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6010_e10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004162

ORF Size: 645 bp

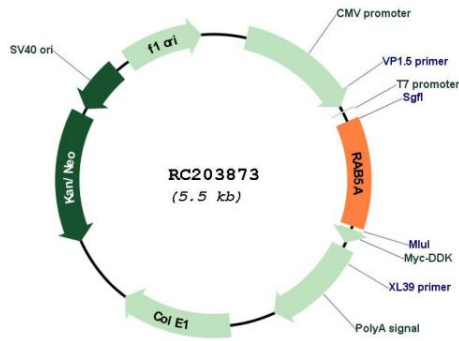
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

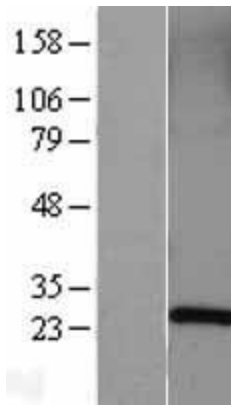
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_004162.3 , NP_004153.2
RefSeq Size:	2548 bp
RefSeq ORF:	648 bp
Locus ID:	5868
UniProt ID:	P20339
Cytogenetics:	3p24.3
Domains:	ras, RAN, RAS, RHO, RAB
Protein Families:	Druggable Genome
Protein Pathways:	Amyotrophic lateral sclerosis (ALS), Endocytosis
MW:	23.7 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 (PubMed:10818110, PubMed:14617813, PubMed:16410077, PubMed:15378032). Contributes to the regulation of filopodia extension (PubMed:14978216). Required for the exosomal release of SDCBP, CD63, PDCD6IP and syndecan (PubMed:22660413). Regulates maturation of apoptotic cell-containing phagosomes, probably downstream of DYN2 and PIK3C3 (By similarity).[UniProtKB/Swiss-Prot Function]

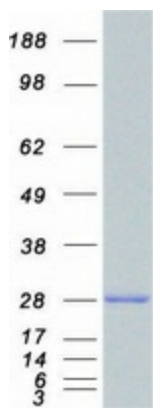
Product images:



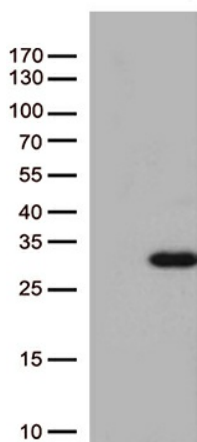
Circular map for RC203873



Western blot validation of overexpression lysate (Cat# [LY401339]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203873 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RAB5A protein (Cat# [TP303873]). The protein was produced from HEK293T cells transfected with RAB5A cDNA clone (Cat# RC203873) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RAB5A (Cat# RC203873, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-RAB5A (Cat# [TA812808])(1:500).