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Product datasheet for RC224262

RAC1 (NM_018890) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAC1 (NM_018890) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RAC1
Synonyms:	MIG5; MRD48; p21-Rac1; Rac-1; TC-25
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC224262 representing NM_018890 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGCAGGCCATCAAGTGTGTGGTGGTGGGAGACGGAGCTGTAGGTAAAACTTGCCTACTGATCAGTTACA CAACCAATGCATTTCCTGGAGAATATATCCCTACTGTCTTTGACAATTATTCTGCCAATGTTATGGTAGA TGGAAAACCGGTGAATCTGGGCTTATGGGATACAGCTGGACAAGAAGATTATGACAGATTACGCCCCCTA TCCTATCCGCAAACAGTTGGAGAAACGTACGGTAAGGATATAACCTCCCGGGGCAAAGACAAGCCGATTG CCGATGTGTTCTTAATTTGCTTTTCCCTTGTGAGTCCTGCATCATTTGAAAATGTCCGTGCAAAGTGGTA TCCTGAGGTGCGGCACCACTGTCCCAACACTCCCATCATCCTAGTGGGAACTAAACTTGATCTTAGGGAT GATAAAGACACGATCGAGAAACTGAAGGAGAAGAAGCTGACTCCCATCACCTATCCGCAGGGTCTAGCCA TGGCTAAGGAGATTGGTGCTGTAAAATACCTGGAGTGCTCGGCGCTCACACAGCGAGGCCTCAAGACAGT GTTTGACGAAGCGATCCGAGCAGTCCTCTGCCCGCCTCCCGTGAAGAAGAGGAAGAGAAAATGCCTGCTG TTG ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC224262 representing NM_018890
Red=Cloning site Green=Tags(s)

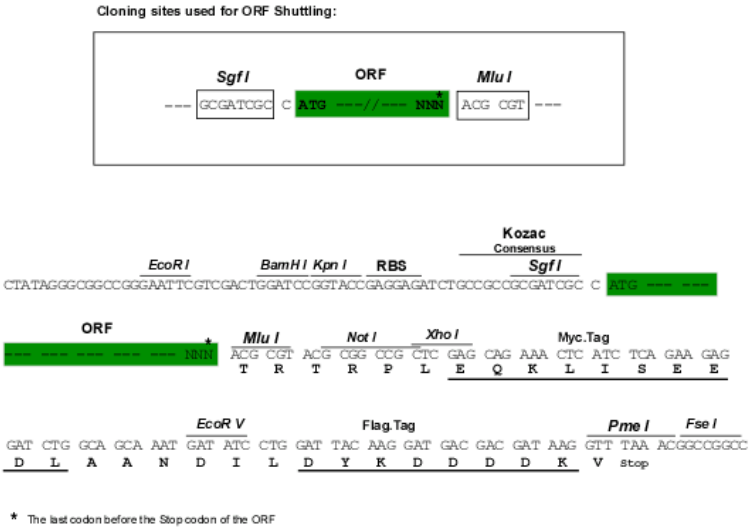
MQAIKCVVVGDGAVGKTCLLISYTTNAFPGEYIPTVFDNYSANVMVDGKPVNLGLWDTAGQEDYDRLRPL
SYPQTVGETYGKDITSRGKDKPIADVFLICFSLVSPASFENVRAKWYPEVRHHCPNTPIILVGTKLDLRD
DKDTIEKLKEKKLTPITYPQGLAMAKEIGAVKYLECSALTQRGLKTVFDEAIRAVLCPPPVKKRKRKCLL
L

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4146_f07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_018890

ORF Size: 633 bp

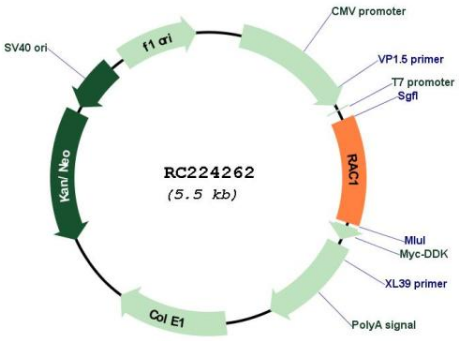
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially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

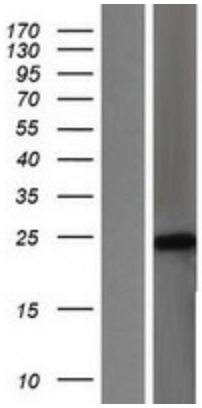
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_018890.4
RefSeq Size:	2412 bp
RefSeq ORF:	636 bp
Locus ID:	5879
UniProt ID:	P63000
Cytogenetics:	7p22.1
Domains:	ras
Protein Families:	Druggable Genome
Protein Pathways:	Adherens junction, Amyotrophic lateral sclerosis (ALS), Axon guidance, B cell receptor signaling pathway, Chemokine signaling pathway, Colorectal cancer, Epithelial cell signaling in Helicobacter pylori infection, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Leukocyte transendothelial migration, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Pancreatic cancer, Pathways in cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, Toll-like receptor signaling pathway, VEGF signaling pathway, Viral myocarditis, Wnt signaling pathway
MW:	23.3 kDa
Gene Summary:	The protein encoded by this gene is a GTPase which belongs to the RAS superfamily of small GTP-binding proteins. Members of this superfamily appear to regulate a diverse array of cellular events, including the control of cell growth, cytoskeletal reorganization, and the activation of protein kinases. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009]

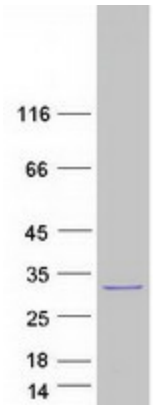
Product images:



Circular map for RC224262



Western blot validation of overexpression lysate (Cat# [LY412906]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224262 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RAC1 protein (Cat# [TP324262]). The protein was produced from HEK293T cells transfected with RAC1 cDNA clone (Cat# RC224262) using MegaTran 2.0 (Cat# [TT210002]).