

Product datasheet for **RC200304**

RAC2 (NM_002872) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: RAC2 (NM_002872) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: RAC2
Synonyms: EN-7; Gx; HSPC022; IMD73A; IMD73B; IMD73C; p21-Rac2
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC200304 representing NM_002872.
Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTT TAGTGAACCGTCAGAATTTTGT AATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCC GCGATCGCC
ATGCAGGCCATCAAGTGTGTGGTGGGAGATGGGGCCGTGGGCAAGACCTGCCTTCTCATCAGCTAC
ACCACCAACGCCTTTCCCGGAGAGTACATCCCCACCGTGTGGACAATTCAGCCAATGTGATGGTG
GACAGCAAGCCAGTGAACCTGGGGCTGTGGGACTGCTGGGCAGGAGGACTACGACCGTCTCCGGCCG
CTCTCCTATCCACAGACGGACGTCTTCTCATCTGCTTCTCCCTCGTCAGCCAGCCTCTTATGAGAAC
GTCCGCGCCAAGTGGTCCAGAAGTGCAGCACCCTGCCCCAGCACCCATCATCCTGGTGGGCACC
AAGCTGGACCTGCGGGACGACAAGGACACCATCGAGAACTGAAGGAGAAGAAGCTGGCTCCCATCACC
TACCCGCAGGGCCTGGCACTGGCCAAGGAGATTGACTCGGTGAAATACCTGGAGTCTCAGCTCTCACC
CAGAGAGGCCTGAAAACCGTGTTCGACGAGGCCATCCGGCCGTGCTGTGCCCTCAGCCACGCGGCAG
CAGAAGCGCGCCTGCAGCCTCCTC
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```

Protein Sequence: >Peptide sequence encoded by RC200304
Blue=ORF Red=Cloning site Green=Tag(s)

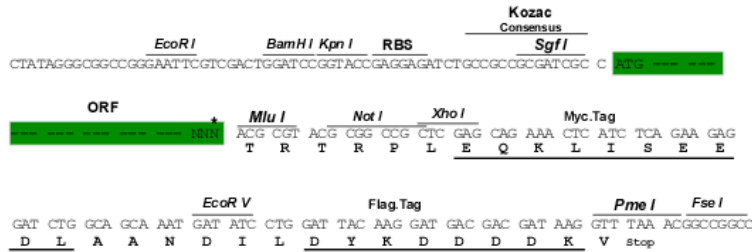
```
MQAIKCVVVDGAVGKTCLLISYTTNAFPGEYIPTVFDNYSANVMVDSKPVNLGLWDTAGQEDYDRLRP
LSYPQTDVFLICFSLVSPASYENVRKWFPEVRHHCPTPIILVGTKLDRDDKDTIEKLKEKLLAPIT
YPQGLALAKEIDSVKYLECSALQTRGLKTVFDEAIRAVLCPQPTRQQKRACSL
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV
```

Restriction Sites: Sgfl-MluI



Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN:

NM_002872

ORF Size:

576 bp

OTI Disclaimer:

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in *E. coli* are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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:

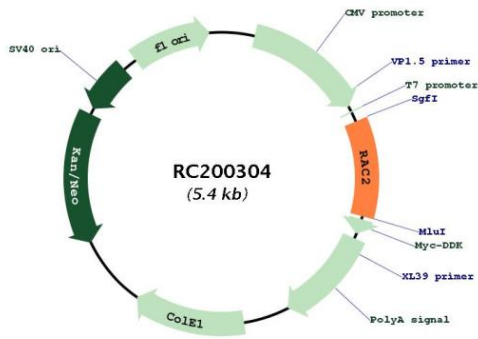
This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components:

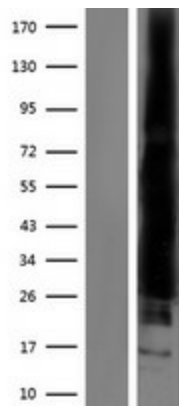
The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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:	NM_002872.5
RefSeq Size:	1538 bp
RefSeq ORF:	579 bp
Locus ID:	5880
UniProt ID:	P15153
Cytogenetics:	22q13.1
Domains:	ras, RAN, RAS, RHO, RAB
Protein Families:	Druggable Genome
Protein Pathways:	Adherens junction, Axon guidance, B cell receptor signaling pathway, Chemokine signaling pathway, Colorectal cancer, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Leukocyte transendothelial migration, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, Pancreatic cancer, Pathways in cancer, Regulation of actin cytoskeleton, VEGF signaling pathway, Viral myocarditis, Wnt signaling pathway
MW:	21.4 kDa
Gene Summary:	This gene encodes a member of the Ras superfamily of small guanosine triphosphate (GTP)-metabolizing proteins. The encoded protein localizes to the plasma membrane, where it regulates diverse processes, such as secretion, phagocytosis, and cell polarization. Activity of this protein is also involved in the generation of reactive oxygen species. Mutations in this gene are associated with neutrophil immunodeficiency syndrome. There is a pseudogene for this gene on chromosome 6. [provided by RefSeq, Jul 2013]

Product images:



Circular map for RC200304



Western blot validation of overexpression lysate (Cat# [LY419051]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200304 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).