

Product datasheet for **SC118358**

RAC2 (NM_002872) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAC2 (NM_002872) Human Untagged Clone
Tag:	Tag Free
Symbol:	RAC2
Synonyms:	EN-7; Gx; HSPC022; IMD73A; IMD73B; IMD73C; p21-Rac2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC118358 sequence for NM_002872 edited (data generated by NextGen Sequencing)

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ATGCAGGCCATCAAGTGTGTGGTGGTGGGAGATGGGGCCGTGGGCAAGACCTGCCTTCTC
ATCAGCTACACCACCAACGCCTTTCCCGGAGAGTACATCCCCACCGTGTTTGACAACTAT
TCAGCCAATGTGATGGTGGACAGCAAGCCAGTGAACCTGGGGCTGTGGGACACTGCTGGG
CAGGAGGACTACGACCGTCTCCGGCCGCTCTCCTATCCACAGACGGACGTCTTCCTCATC
TGCTTCTCCCTCGTCAGCCCAGCCTCTTATGAGAACGTCCGCGCCAAGTGGTTCCCAGAA
GTGCGGCACCACTGCCCCAGCACACCCATCATCCTGGTGGGCACCAAGCTGGACCTGCGG
GACGACAAGGACACCATCGAGAACTGAAGGAGAAGAAGCTGGCTCCCATCACCTACCCG
CAGGGCCTGGCACTGGCCAAGGAGATTGACTCGGTGAAATACCTGGAGTGCTCAGCTCTC
ACCCAGAGAGGCCTGAAAACCGTGTTCGACGAGGCCATCCGGGCCGTGCTGTGCCCTCAG
CCCACGCGGCAGCAGAAGCGCGCCTGCAGCCTCCTCTAG
```

Clone variation with respect to NM_002872.3



[View online »](#)

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002872 unedited
 NTGTTCAAAATTTTGTAAATACGACTCACTTATAGGGCGGCCGGAATTCGCACGAGGGCT
 GTCACCACCGACTCTCCAGGCTCCGGACACGATGCAGGCCATCAAGTGTGTGGTGGT
 GGAGATGGGGCCGTGGGCAAGACCTGCCTTCTCATCAGCTACACCACCAACGCCTTTCCC
 GGAGAGTACATCCCCACCGTGTGGGACACTGCTGGGACAGGACTACGACCGTCTCCGGCCG
 CCACTGAACCTGGGGCTGTGGGACACTGCTGGGACAGGACTACGACCGTCTCCGGCCG
 CTCTCCTATCCACAGACGAGCTCTTCTCATCTGCTTCTCCCTCGTCAGCCCAAGCTCT
 TATGAGAACGTCCGCGCCAAGTGGTTCCAGAAGTGCAGGACCACTGCCCCAGCACACCC
 ATCATCTGTTGGGACCAAGCTGGACCTGCGGGACGACAAGGACACCATCGAGAAACTG
 AAGGAGAAGAAGCTGGCTCCCATCACCTACCCGACGGGCTGGCACTGGCCAAGGAGATT
 GACTCGGTGAAATACCTGGAGTGTCTCAGCTCTACCCAGAGAGGCTGAAAACCGTGTTC
 GACGAGGCCATCCGGGCCGTGCTGTGCCCTCAGCCACGCGGCAGCAGAAGCGCGCTGC
 AGCCTCCTCTAGGGTTGCACCCAGCGCTCCACCTAGATGGTCTGATCCTCCAGAT
 CCCCACCAAAGCTGATGGCACCCGGCTGGCCATGCTGTCCCCTCTGTGGCGTTTCT
 TAACAGATGGCTGCAGAGCTTCGTTGATGGTCTTTTCTGTACTGGAGGCCTNCTGAGCCA
 NGAACGTGCAATTTGAGTGTGCATNCCAAGCCCTCATGCTCTGCTTCTGAGGCCAGAG
 GNGAGCCCAGACCATTAGCC

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_002872 unedited
 CCGCAATCTAGAGTGCAGTTTTTTTTTTTTTTTTTTTGAATCAATAAATTTATTTTCTGCT
 TAAGCAGGTTGAGTTGGGTTTTCTATTTGCAATAGCAAAAGTCTGACTGGCAAGGTTTA
 AAAGTTTGAAGACTCTCACAGTAAGTGCAGCTCAAGATCCTGTGAGTGCAGCAGAAAGT
 CTTAAGAAATGGCAGGGGCTGGTTGAACCCATATTTTCCATTGGCTGAGCAGATATCCCC
 AGAGGCGTAGAAAATTAATTTGTTTTATGTTGTCCAAAAGAGGAGAAGTGGAGCCAGA
 GGAGCACACTTCTGAGACTCATTTTTGCTGGGTAGAGGAACTCTTGCAAGCAGGAC
 CATCGATATTAGAGCAGCTGGCCTCAGGAGGGAGTAAGAGCCCCATCCCTGAAGGTACAC
 AAGTTGTGGCAGCAACCATCTGGCCTGCAGTTCCATAGGGGAGTCATGCGTGGGGTGGG
 ACTGGAGTGAACGGGTAGATGCTCCACATGCGGCAGTTGGCACTGACGGCAGGAACACG
 GAGGTGGCTTAATGGGTCCTGAGGCTCCCCTCTGGCCCTCATGAAGGCAGGAGCATGATG
 GGCTTNGATGCATCACCTGCAATTTGCACGTTCCCTGGCCTCATGATGCCTNCAAGTACA
 GAAAAGACCATCAACGAAGCTCTGCAGCCATCTGCTAAGAAACGCCACATGGAGGGGACA
 GCATGGCCAGCCCGGTGCCATCAGGCTTTGGGTGGGGATCCTGGNAGATCANACCCATC
 TATGTGGGAGCGCTGGGGTGCACCNCTATAGGAGCTGCANGCGCCTTCTGCTGCCGCGT
 GGGCTGATGCACATCACGGCCGGNATGGCTCGTGAACACGTTTNAAGCCTCTCTGGGTG
 AGAGCTGACACTTCCAGTTTTACCGGTNAATCTCCTGGCCTGCCAGNCCTGCGGTAGT
 GATGGAGCANCTTTTCTCATTCTCGAGGGCCTN

Restriction Sites:

NotI-NotI

ACCN:

NM_002872

Insert Size:

1530 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](#)

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_002872.3](#), [NP_002863.1](#)

RefSeq Size: 1516 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

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]