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Product datasheet for MC200361

Rac1 (BC003828) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rac1 (BC003828) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rac1
Synonyms:	AL023026; D5Ertd559e
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

>BC003828
CCCACGCGTCCGGCTTTGGGTGGTGGCTGCTGCTGCGCTTCGCCTTCCCGTGCGCTGAGGGCCCGGCGGC
GTGGACAGCAGTCCCGGCACTCGGCGCCCCGCCGCCCGCAGCCTCGCCCAGCGCTTCCCGAGCCCGCCGC
TTCGCGCCTCAGCCACCGGCCGCCGCCGCCGCCGCCGCGGCCCACCGAGCGGCCCAGATGCAGGCCATCA
AGTGTGTGGTGGTGGGAGACGGAGCTGTTGGTAAAACCTGCCTGCTCATCAGTTACACGACCAATGCATT
TCCTGGAGAGTACATCCCCACCGTCTTTGACAACTATTCTGCCAATGTTATGGTAGATGGAAAACCAGTG
AATCTGGGCCTATGGGACACAGCTGGACAAGAAGATTATGACAGATTGCGTCCCCTCTCCTACCCGCAGA
CAGACGTGTTCTTAATTTGCTTTTCCCTTGTGAGTCCTGCATCATTTGAAAATGTCCGTGCAAAGTGGTA
TCCTGAAGTGCGACACCACTGTCCCAATACTCCTATCATCCTCGTGGGGACGAAGCTTGATCTTAGGGAT
GATAAGGACACCATTGAGAAGCTGAAGGAGAAGAAGCTGACTCCCATCACCTACCCGCAGGGGCTGGCCA
TGGCGAAAGAGATCGGTGCTGTCAAATACCTGGAGTGCTCAGCTCTCACACAGCGAGGACTCAAGACAGT
GTTTGACGAAGCTATCCGAGCGGTTCTCTGTCCCCCTCCTGTCAAGAAGAGGAAGAGAAAATGCCTGCTG
TTGTAAATGTCGGAGCCCCTCGTTCTCGGTCCTGCCTGGAACCTTTGTACGCTTTGCTCAAAAATCAGCG
AGCCTTCGCATTTGATGCCAAGTTTTTGTTACAGATTAATTTTTCCATAAAACCATTTTGAACCAATGAA
CCAGTCAATAATTTTAAGGTTCTGTTTTAAATGTAAGAATTCCAACTTACAGTCTATTAAAATTCAGCCC
TAAAATGACAAAGCCTTCTTAAAGCCTTATTTTTAAAATCCCCCATTCTTGCTCAGATTAAAAATTGCCA
AAATACCTTCTGAACTAAGTTGCGTTGTGCTGAGAACACCTAAGCACTAAACTCTCTTGAGAGACTTCTG
TTGCTAAGAAGACCGCAGCTTCTGGAGCCAGGGGTGCAGACCCTTCCAGAGTTCCCAGACCGTGTGACAC
AGCACAGCCTCCTTAATGACACGTTGCCATGTAACGCACCTGTAACTTATCAGCCCATGTTCATTACGTA
ACTTTGTACTGTACGTCACAGTGATGAGTGTGACAGCTCAGCTCTTTGATTTCATAGTGAGTTTTCTAAA
AGACCAGCCGACTAGCTTTTGCAGACTTTGAACAGAACTCTGGTTCCTGTGTTGCCTCTAATGAAGTATT
CTGTTCCTAGTTGTGGGTGTGCTGGGTGGAGTGTGAAACACGACATGATCAAAGGAGACAGACAGTATTT
TGACTAATATGAAGTAGAGATTACTTTACACTACATTGTACATGGAGTAATTCAACTGAATAAAAGTGTC
ACGGGTAAAGCTTTTTAACGGTTAATTTCTGTCAAACAGTAGGTGACAAATGGCCGATCTTATCAGTGTC
TCTTGAGCATCCCTTCGCGCCCCCCACCCTCCACTGCCGTCCCTCCCCAGATGGGGCGTTGAGTCCATAT
TTAAACTGGCCACCCTCACAGTTCTAACTTAGCAAGTGCTTTTCTTTAGAACCCCTTCTTAACGAGCAAT
ATGTCTGACCTGTACTATAAGATCTTTCTGATAACGCAGAGATTTTTTGTTTTTTTTTGGTAGCTCAGTA
GAAGTGCGTCCTGTTTTCGCCTTACTTTACTCAGAGCTAGTTAGTGCTTCCTTAGTTTCCTAGCAACTAG
GTGTGCAAATCATGTGTTGCAGCTTTACGGTTTTTAAACTATTTTAGATATTCTTAAACTATGAACCTTC
TAAACAGTACCAACACTGTCATGTGACTAATGCTGCCTCTAGACCTCGCCCACGTGGACAGACGCTTCCT
GTCATGGCTCTGCCTAGAGATGTTCCTTGGGGTCTGTGAGGTTCTGTCAACTGCTAGTGCTAACGCTGTC
CTGTACAACCTAACTCACTGGCAAGAATGCAGTGTTGGGCCTTTCAACCACTAGAACAAACTTTTTTCAA
TTGACAGTTGCAGAATTGTGGAGTGTTTTTACATTGATCTTTTGCTAATGCAGTTAGCAGTATGTTTTGC
ATGTATGAATTAATAAATCCTTGAATCATACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA AAAAAAAAA

Restriction Sites: RsrII-NotI

ACCN: BC003828

Insert Size: 579 bp

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.
RefSeq:	BC003828, AAH03828
RefSeq Size:	2319 bp
RefSeq ORF:	579 bp
Locus ID:	19353
Cytogenetics:	5 82.22 cM
Gene Summary:	Plasma membrane-associated small GTPase which cycles between active GTP-bound and inactive GDP-bound states (PubMed:24352656). In its active state, binds to a variety of effector proteins to regulate cellular responses such as secretory processes, phagocytosis of apoptotic cells, epithelial cell polarization, neurons adhesion, migration and differentiation, and growth-factor induced formation of membrane ruffles. Rac1 p21/rho GDI heterodimer is the active component of the cytosolic factor sigma 1, which is involved in stimulation of the NADPH oxidase activity in macrophages. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly. Stimulates PKN2 kinase activity. In concert with RAB7A, plays a role in regulating the formation of RBs (ruffled borders) in osteoclasts. In glioma cells, promotes cell migration and invasion. Required for atypical chemokine receptor ACKR2-induced LIMK1-PAK1-dependent phosphorylation of cofilin (CFL1) and for up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. In podocytes, promotes nuclear shuttling of NR3C2; this modulation is required for a proper kidney functioning. In neurons, is involved in dendritic spine formation and synaptic plasticity (PubMed:24352656, PubMed:26969129). In synapses, seems to mediate the regulation of F-actin cluster formation performed by SHANK3.[UniProtKB/Swiss-Prot Function]