

Product datasheet for **MR230731**

Racgap1 (NM_001253809) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Racgap1 (NM_001253809) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Racgap1
Synonyms:	AI227039; AI327394; Band25; gtl11; GTPase; MgcRacGAP; mKIAA1478
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR230731 representing NM_001253809
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAATACTACAATGGTGAATTTGTGGACTCTGTTTGTGAGCAGCTTGTGCGCCGGATGGAGATTATCAATG
 AAGGAAATGAAAGCATTGAATTCATCCAGGTTGTGAAGGACTTCGAGGACTTCCGAAAGAAGTATCAAAG
 AACCAACCAGGAGCTGGAGAAATTCAAAGACCTATTGTTGAAAGCAGAGACTGGGCGGAGCGCCCTGGAC
 GTGAAGCTGAAGCATGCCCGTAATCAAGTGGACGTGGAGATCAAGCGGAGGCAGCGCGCTGAGGCAGAGT
 GTGCAAAGCTGGAACAACAGATTGAGCTGATTCGAGACATACTCATGTGTGACACATCTGGCAGTATTCA
 GCTGAGCGAGGAACAAAAATCAGCTCTCGCTTTCCTCAACCGAGGCCAAGCATCCAGTGGCCACGCCGGC
 AACATAGACTGTCAACGATTGATGAATCTGGTCCATTTTATCAGATATCAGCTTTGACAAGACTGATG
 AATCACTGGACTGGGATTCTTCTTTGGTGAAGAATTTCAAATGAAGAAACGAGAGAAGAGGCGCTCCAA
 CAGTAGACAGTTCATCGACGGCCCTCTGGGCCTGTGAAGAAAATTGTTCCATTGGCTCTACAGTAGAC
 CAGGCAAATGAATCAATAGTTGCAAAAACCTACAGTACTGTTCCAGTGTGGGGACCCATTGAAGCTG
 TGCTACTATTGAGACATTGCCGTCCTGGACCAGGAGTCGCGGGAAGTCAGGACCTTTACAACCTGTGAA
 CAGTACTCCGCTCTGAACAGCAGGCCACTGGAGCCAAGAAGTACACAGACAATTTGGGCACACCTCAG
 AATACTGGAGGCATGCGCTTGCACGACTTCGTCTCAAAGACGGTTATTAAGCCTGAATCTTGTGTTCCGT
 GTGAAAGCGGATCAAGTTTGGCAAGCTGTCTCTGAAGTGTGAGACTGTCGTTTGGTCTCCCATCCAGA
 ATGTCGGGACCGATGTCCTTCCCTGCATCCCCCTGGTGGGACACCGGTTAAGATTGGAGAGGGC
 ATGCTGGCCGACTTCGTGTCGAGGCTTCTCCATGATCCCTGCCATTGTCGTGAGTGTCAATGAGA
 TCGAGCAGCGAGGCTGACTGAGCAGGCTGTACAGGATCTCAGGCTGTGACCGCACAGTGAAGAAGT
 GAAAGAAAAATTCCTTAAGGTGAAAACCTGTGCCCTCTCAGCAAAGTGGACGATATCCAGTCTACTG
 AGCCTCTGAAGGACTTCTGCGCAACCTCAAAGAGCCCTCTGACCTTCTGGGTGAGCAAAGCCTTCA
 TGGAGGCAGCAGAGATAACAGATGAAGACAACAGCACAGCCGCAATGTACCAGGCTGTGAGTGGAGTGC
 CCAGGCCAACAGGGACAGCTAGCCTTCTTATGATCCACCTACAGAGAGTGTCTCAGAGTCCAGACACT
 AAGATGGATATTGCCAATCTAGCTAAAGTCTTTGGCCCTACAATAGTTGCCATACTGTGCCAATCCAG
 ATCCAGTGACAATGTTCCAGGACATCAAACGTGAGTCAAGGTGGTGGAGCGCTACTCTCTCCCTT
 GGAGTACTGGAATCAGTTCATGATGGTGGACCAAGAGAACATAGACAGCCAGCGAGGCAATGAAACTCA
 ACACCAGCACACCAGAGCTTAAAGTGAAGTACTGGGCTGTGACCACTCCTGAATTCAGCTTGTCA
 AGACTCCTTTATCAAGTTCCTGTACAGAGGTTGTACAACCTCTCAAGAGCACACCCAGATTTGGGAA
 CAAGAGCAAGTCTGCCACCAACTTAGGTCAACAGGGCAAATTTTCCCTGCTCCGTACCTCAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR230731 representing NM_001253809
 Red=Cloning site Green=Tags(s)

MDTTMVNLWTLFEQLVRRMEIINEGNESIEFIQVVKDFEDFRKKYQRTNQELEKFKDLLLKAETGRSALD
 VKLKHARNQVDVEIKRRQRAEAECALKEQQIQLIRDILMCDTSGSIQLSEEKLSALAFNRGQASSGHAG
 NNRLSTIDESGILSDISFDKTDWSSLVKNFKMKKREKRRSRSRQFIDGPPGPVKKTCISIGSTVD
 QANESIVAKTTVTPSDGGPIEAVSTIETLPSWTRSRGKSGPLQPVNSDSALNSRPLEPRDNDLGTGPQ
 NTGGMRLHDFVSKTVIKPESCVPCGKRIKFGKLSLKCRDRLVSHPECRDRCPPLPPIPLVGTVPKIGEG
 MLADFVSQASPMIPAIIVVSCVNEIEQRGLTEAGLYRISGCDRTVKELKEKFLKVKTVPLLSKVDDIHVIC
 SLLKDFLRNLKEPLLTFWLKAFMEAAEITDEDNSTAAMYQAVSELPQANRDTLAFLEMIHLQRVVSQSPDT
 KMDIANLAKVFGPTIVAHTVNPDPVTFMFDIKRQLKVVVERLLSLPLEYWNQFMMVDQENIDSQRGNNGS
 TPRTDPVKVSLGPTTPEFQLVKTPLSLSSLSQRLYNLSKSTPRFNGKSKSATNLGQQGKFFPAPYLK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001253809

ORF Size: 1884 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_001253809.1](#), [NP_001240738.1](#)

RefSeq Size: 2930 bp

RefSeq ORF: 1887 bp

Locus ID: 26934

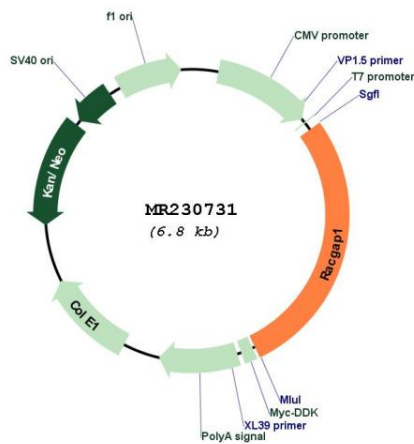
UniProt ID: [Q9WVM1](#)

Cytogenetics: 15 F1

MW: 70.6 kDa

Gene Summary: Component of the centralspindlin complex that serves as a microtubule-dependent and Rho-mediated signaling required for the myosin contractile ring formation during the cell cycle cytokinesis. Required for proper attachment of the midbody to the cell membrane during cytokinesis. Plays key roles in controlling cell growth and differentiation of hematopoietic cells through mechanisms other than regulating Rac GTPase activity. Also involved in the regulation of growth-related processes in adipocytes and myoblasts. May be involved in regulating spermatogenesis and in the RACGAP1 pathway in neuronal proliferation. Shows strong GAP (GTPase activation) activity towards CDC42 and RAC1 and less towards RHOA. Essential for the early stages of embryogenesis. May play a role in regulating cortical activity through RHOA during cytokinesis. May participate in the regulation of sulfate transport in male germ cells.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR230731