

Product datasheet for **MR209580**

Racgap1 (BC010715) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Racgap1 (BC010715) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Racgap1
Synonyms:	Band25, GTPase, MgcRacGAP, gtl11
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR209580 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAATACTACAATGGTGAATTTGTGGACTCTGTTTGAGCAGCTTGTGCGCCGGATGGAGATTATCAATG
 AAGGAAATGAAAGCATTGAATTCATCCAGGTTGTGAAGGACTTCGAGGACTTCGAAAGAAGTATCAAAG
 AACCAACCAGGAGCTGGAGAAATTCAAAGACCTATTGTTGAAAGCAGAGACGGGGCGGAGCGCCCTGGAC
 GTGAAGCTGAAGCATGCCGTAATCAAGTGGACGTGGAGATCAAGCGGAGGCAGCGCGCTGAGGCAGAGT
 GTGCAAAGCTGGAACAACAGATTGAGTTCGAGACATACTCATGTGTGACACATCTGGCAGTATTCA
 GCTGAGCGAGGAACAAAAATCAGCTCTCGCTTTCCTCAACCGAGGCCAAGCATCCAGTGGCCACGCCGGC
 AACATAGACTGTCAACGATTGATGAATCTGGTCCATTTATCAGATATCAGCTTTGACAAGACTGATG
 AATCACTGGACTGGGATTCTTCTTTGGTGAAGAATTTCAAATGAAGAAACGAGAGAAGAGGCGCTCCAA
 CAGTAGACAGTTCATCGACGGCCCTCTGGGCTGTGAAGAAAATTGTTCCATTGGCTCTACAGTAGAC
 CAGGCAAATGAATCAATAGTTGCAAAAACCTACAGTACTGTTCCAGTGTGGGGACCCATTGAAGCTG
 TGTCTACTATTGAGACATTGCCGTCCTGGACCAGGAGTCGCGGGAAGTCAGGACCTTTACAACCTGTGAA
 CAGTACTCCGCTCTGAACAGCAGGCCACTGGAGCCAAGAAGTACACAGACAATTTGGGCACACCTCAG
 AATACTGGAGGCATGCGCTTGCACGACTTCGTCTCAAAGACGGTTATTAAGCCTGAATCTTGTGTTCCGT
 GTGAAAGCGGATCAAGTTTGGCAAGCTGTCTGAAAGTGTGAGACTGTCGTTTGGTCTCCCATCCAGA
 ATGTCGGGACCGATGTCCTTCCCTGCATCCCCCTGGTGGGACACCGGTTAAGATTGGAGAGGGC
 ATGCTGGCCGACTTCGTGTCGAGGCTTCTCCATGATCCCTGCCATTGTCGTGAGTGTCAATGAGA
 TCGAGCAGCGAGGCTGACTGAGCAGGCTGTACAGGATCTCAGGCTGTGACCGCACAGTGAAGAACT
 GAAAGAAAAATTCCTTAAGGTGAAAACCTGCCCCCTCCTCAGCAAAGTGGACGATATCCAGTCTACTGC
 AGCCTCCTGAAGGACTTCTGCGCAACCTCAAAGAGCCCCCTCCTGACCTTCTGGGTGAGCAAAGCCTTCA
 TGGAGGCAGCAGAGATAACAGATGAAGACAACAGCACAGCCGCCATGTACCAGGCTGTCAGTGGAGTCC
 CCAGGCCAACAGGGACACGCTAGCCTTCTTATGATCCACCTACAGAGAGTGTCTCAGAGTCCAGACACT
 AAGATGGATATTGCCAATCTAGCTAAAGTCTTTGGCCCTACAATAGTTGCCATACTGTGCCAATCCAG
 ATCCAGTGACAATGTTCCAGGACATCAAACGTGAGTCAAGGTGGTGGAGCGCTACTCTCTCCCCTT
 GGAGTACTGGAATCAGTTCATGATGGTGGACCAAGAGAACATAGACAGCCAGCGAGGCAATGAAACTCA
 ACACCACGCACACAGACGTTAAAGTGAAGTACTGGGCTGTGACCACTCCTGAATTCAGCTTGTCA
 AGACTCCTTTATCAAGTTCCTGTACAGAGGTTGTACAACCTCCTCAAGAGCACACCCAGATTTGGGAA
 CAAGAGCAAGTCTGCCACCAACTTAGGTCAACAGGGCAAATTTTCCCTGCTCCGTACCTCAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR209580 protein sequence
 Red=Cloning site Green=Tags(s)

MDTTMVLNWLFEQLVRRMEIINEGNESIEFIQVVKDFEDFRKKYQRTNQELEKFKDLLLKAETGRSALD
 VKLKHARNQVDVEIKRRQRAEAECAKLEQQIQLIRDILMCDTSGSIQLSEEKLSALAFNRGQASSGHAG
 NNRLSTIDESGILSDISFDKTDWSSLVKNFKMKKREKRRSRSRQFIDGPPGPVKKTCISIGSTVD
 QANESIVAKTTVTPSDGGPIEAVSTIETLPSWTRSRGKSGPLQPVNSDSALNSRPLEPRDNDLGTGPQ
 NTGGMRLHDFVSKTVIKPESCVPCGKRIKFGKLSLKCRDRLVSHPECRDRCPPLPIPLVGTVPKIGEG
 MLADFVSQASPMIPAIIVVSCVNEIEQRGLTEAGLYRISGCDRTVKELKEKFLKVKTVPLLSKVDDIHVIC
 SLLKDFLRNLKEPLLTFWLKAFMEAAEITDEDNSTAAMYQAVSELPQANRDTLAFLEMIHLQRVQSQSPDT
 KMDIANLAKVFGPTIVAHTVNPDPVTFMFDIKRQLKVVVERLLSLPLEYWNQFMMVDQENIDSQRGNNGS
 TPRTPDVKVSLGPTTPEFQLVKTPLSLSSLSQRLYNLSKSTPRFGNKSATNLGQQGKFFPAPYLK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: BC010715

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: [BC010715](#), [AAH10715](#)

RefSeq Size: 2913 bp

RefSeq ORF: 1886 bp

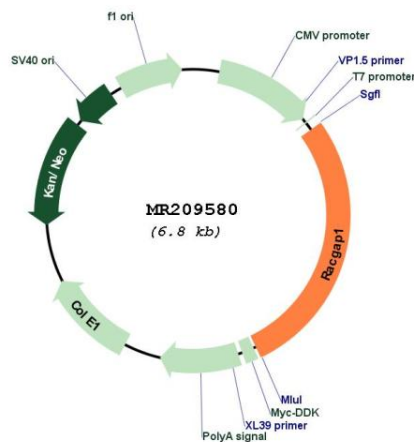
Locus ID: 26934

Cytogenetics: 15 F1

MW: 70.2 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 MR209580