

Product datasheet for **MR216578**

Racgap1 (NM_012025) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Racgap1 (NM_012025) 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:

>MR216578 representing NM_012025
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAATACTACAATGGTGAATTTGTGGACTCTGTTTGAGCAGCTTGTGCGCCGGATGGAGATTATCAATG
 AAGGAAATGAAAGCATTGAATTCATCCAGGTTGTGAAGGACTTCGAGGACTTCCGAAAGAAGTATCAAAG
 AACCAACCAGGAGCTGGAGAAATTCAAAGACCTATTGTTGAAAGCAGAGACTGGGCGGAGCGCCCTGGAC
 GTGAAGCTGAAGCATGCCCGTAATCAAGTGGACGTGGAGATCAAGCGGAGGCAGCGCGCTGAGGCAGAGT
 GTGCAAAGCTGGAACAACAGATTCAGCTGATTCGAGACATACTCATGTGTGACACATCTGGCAGTATTCA
 GCTGAGCGAGGAACAAAATCAGCTCTCGCTTTCCTCAACCGAGGCCAAGCATCCAGTGGCCACGCCCGGC
 AACATAGACTGTCAACGATTGATGAATCTGGTCCATTTTATCAGATATCAGCTTTGACAAGACTGATG
 AATCACTGGACTGGGATTCTTCTTTGGTGAAGAATTTCAAATGAAGAAACGAGAGAAGAGGCGCTCCAA
 CAGTAGACAGTTCATCGACGGCCCTCTGGGCCTGTGAAGAAAATTGTTCCATTGGCTCTACAGTAGAC
 CAGGCAAATGAATCAATAGTTGCAAAAACCTACAGTGAAGTTCAGTGTCCAGTGTGGGGACCCATTGAAGCTG
 TGTCTACTATTGAGACATTGCCGTCCTGGACCAGGAGTCCGCGGAAGTCAGGACCTTTACAACCTGTGAA
 CAGTGAAGTCCGCTCTGAACAGCAGGCCACTGGAGCCAAGAAGTGCACAGACAATTTGGGCACACCTCAG
 AATACTGGAGGCATGCGCTTGCACGACTTCGTCTCAAAGACGGTTATTAAGCCTGAATCTTGTGTTCCGT
 GTGAAAGCGGATCAAGTTTGGCAAGCTGTCTCTGAAGTGTGAGACTGTCGTTTGGTCTCCCATCCAGA
 ATGTCGGGACCGATGTCCTTCCCTGCATCCCCCTTGGTGGGACACCGGTTAAGATTGGAGAGGGC
 ATGCTGGCCGACTTCGTGTGCGAGGCTTCTCCATGATCCCTGCCATTGTCGTGAGTGTCAATGAGA
 TCGAGCAGCGAGGCCTGACTGAGCAGGCTTGTACAGGATCTCAGGCTGTGACCCGACAGTGAAGAACT
 GAAAGAAAATTCCTTAAGGTGAAAACCTGTGCCCTCCTCAGCAAAGTGGACGATATCCAGTCTACTGTC
 AGCCTCCTGAAGGACTTCTGCGCAACCTCAAAGAGCCCTCCTGACCTTCTGGGTGAGCAAAGCCTTCA
 TGGAGGCAGCAGAGATAACAGATGAAGACAACAGCACAGCCGCCATGTACCAGGCTGTCAAGTGAAGTGC
 CCAGGCCAACAGGGACACGCTAGCCTTCTTATGATCCACCTACAGAGAGTGTCTCAGAGTCCAGACACT
 AAGATGGATATTGCCAATCTAGCTAAAGTCTTTGGCCCTACAATAGTTGCCATACTGTGCCAATCCAG
 ATCCAGTGACAATGTTCCAGGACATCAAACGTGAGCTCAAGGTGGTGGAGCGCTACTCTCTCCCTT
 GGAGTACTGGAATCAGTTCATGATGGTGGACCAAGAGAACATAGACAGCCAGCGAGGCAATGAAACTCA
 ACACCACGCACACAGACGTTAAAGTGAAGTACTGGGCCTGTGACCACTCCTGAATTCAGCTTGTCA
 AGACTCCTTTATCAAGTTCCTGTACAGAGGTTGTACAACCTCCTCAAGAGCACACCCAGATTTGGGAA
 CAAGAGCAAGTCTGCCACCAACTTAGGTCAACAGGGCAAATTTTCCCTGCTCCGTACCTCAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR216578 representing NM_012025
 Red=Cloning site Green=Tags(s)

MDTTMVLNWLFEQLVRRMEIINEGNESIEFIQVVKDFEDFRKKYQRTNQELEKFKDLLLKAETGRSALD
 VKLKHARNQVDVEIKRRQRAEAECAKLEQQIQLIRDILMCDTSGSIQLSEEKLSALAFNRGQASSGHAG
 NNRLSTIDESGILSDISFDKTDWSSLVKNFKMKKREKRRSRSRQFIDGPPGPVKKTCISIGSTVD
 QANESIVAKTTVTPSDGGPIEAVSTIETLPSWTRSRGKSGPLQPVNSDSALNSRPLEPRDITDNLGTPQ
 NTGGMRLHDFVSKTVIKPESCVPCGKRIKFGKLSLKCRDRLVSHPECRDRCPPLPIPLVGTVPKIGEG
 MLADFVSQASPMIPAIIVVSCVNEIEQRGLTEAGLYRISGCDRTVKELKEKFLKVKTVPLLSKVDDIHVIC
 SLLKDFLRNLKEPLLTFWLKAFMEAAEITDEDNSTAAMYQAVSELPQANRDTLAFLEMIHLQRVVSQSPDT
 KMDIANLAKVFGPTIVAHTVNPDPVTFMFDIKRQLKVVVERLLSLPLEYWNQFMMVDQENIDSQRGNNGS
 TPRTPDVKVSLGPTTPEFQLVKTPLSLSSLSQRLYNLSKSTPRFGNKSATNLGQQGKFFPAPYLK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_012025

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_012025.7](#), [NP_036155.1](#)

RefSeq Size: 3071 bp

RefSeq ORF: 1887 bp

Locus ID: 26934

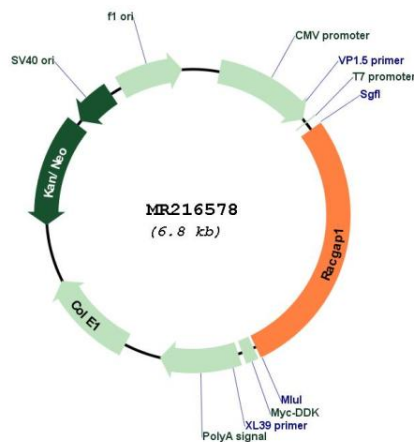
UniProt ID: [Q9WVM1](#)

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 MR216578