

Product datasheet for **MG209580**

Racgap1 (BC010715) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Racgap1 (BC010715) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Racgap1
Synonyms:	Band25, GTPase, MgcRacGAP, gtl11
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG209580 representing BC010715
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAATACTACAATGGTGAATTTGTGGACTCTGTTTGTGAGCAGCTTGTGCGCCGGATGGAGATTATCAATG
 AAGGAAATGAAAGCATTGAATTCATCCAGTTGTGAAGGACTTCGAGGACTTCGAAAGAAGTATCAAAG
 AACCAACCAGGAGCTGGAGAAATTCAAAGACCTATTGTTGAAAGCAGAGACGGGGCGGAGCGCCCTGGAC
 GTGAAGCTGAAGCATGCCGTAATCAAGTGGACGTGGAGATCAAGCGGAGGCAGCGCGCTGAGGCAGAGT
 GTGCAAAGCTGGAACAACAGATTGAGCTGATTCGAGACATACTCATGTGTGACACATCTGGCAGTATTCA
 GCTGAGCGAGGAACAAAAATCAGCTCTCGCTTTCCTCAACCGAGGCCAAGCATCCAGTGGCCACGCCGGC
 AACATAGACTGTCAACGATTGATGAATCTGGTCCATTTTATCAGATATCAGCTTTGACAAGACTGATG
 AATCACTGGACTGGGATTCTTCTTTGGTGAAGAATTTCAAATGAAGAAACGAGAGAAGAGGCGCTCCAA
 CAGTAGACAGTTCATCGACGGCCCTCTGGCCGTGAAGAAAATTGTTCCATTGGCTCTACAGTAGAC
 CAGGCAAATGAATCAATAGTTGCAAAAACCTACAGTGAAGTTCAGTGTCCAGTGTGGGGACCCATTGAAGCTG
 TGCTACTATTGAGACATTGCCGTCCTGGACCAGGAGTCGCGGGAAGTCAGGACCTTTAACACCTGTGAA
 CAGTGAAGTCCGCTCTGAACAGCAGGCCACTGGAGCCAAGAAGTACACAGACAATTTGGGCACACCTCAG
 AATACTGGAGGCATGCGCTTGCACGACTTCGTCTCAAAGACGGTTATTAAGCCTGAATCTTGTGTCCGT
 GTGAAAGCGGATCAAGTTTGGCAAGCTGTCTGAAGTGTGAGACTGTCGTTTGGTCTCCCATCCAGA
 ATGTCGGGACCGATGTCCTTCCCTGCATCCCCCTGGTGGGACACCGGTTAAGATTGGAGAGGGC
 ATGCTGGCCGACTTCGTGTGCGAGGCTTCTCCATGATCCCTGCCATTGTCGTGAGTGTCAATGAGA
 TCGAGCAGCGAGGCTGACTGAGCAGGCTTGTACAGGATCTCAGGCTGTGACCGCACAGTGAAGAACT
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 AGCCTCCTGAAGGACTTCTGCGCAACCTCAAAGAGCCCTCCTGACCTTCTGGGTGAGCAAAGCCTTCA
 TGGAGGCAGCAGAGATAACAGATGAAGACAACAGCACAGCCGCAATGTACCAGGCTGTGAGTGGAGTCC
 CCAGGCCAACAGGGACACGCTAGCCTTCTTATGATCCACCTACAGAGAGTGTCTCAGAGTCCAGACACT
 AAGATGGATATTGCCAATCTAGCTAAAGTCTTTGGCCCTACAATAGTTGCCATACTGTGCCAATCCAG
 ATCCAGTGACAATGTTCCAGGACATCAAACGTGAGCTCAAGGTGGTGGAGCGCTACTCTCTCCCCTT
 GGAGTACTGGAATCAGTTCATGATGGTGGACCAAGAGAACATAGACAGCCAGCGAGGCAATGAAACTCA
 ACACCAGCACACCAGACGTTAAAGTGAAGTACTGGGCTGTGACCACTCCTGAATTCAGCTTGTCA
 AGACTCCTTTATCAAGTTCCTGTACAGAGGTTGTACAACCTCCTCAAGAGCACACCCAGATTTGGGAA
 CAAGAGCAAGTCTGCCACCAACTTAGGTCAACAGGGCAAATTTTCCCTGCTCCGTACCTCAAG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG209580 representing BC010715
 Red=Cloning site Green=Tags(s)

MDTTMVNLTWLFELVRRMEIINEGNESIEFIQVVKDFEDFRKKYQRTNQELEKFKDLLLKAETGRSALD
 VKLKHARNQVDVEIKRRQRAEAECALKEQQIQLIRDILMCDTSGSIQLSEEKQSALAFLNRGQASSGHAG
 NNRLSTIDESGILSDISFDKTDWSSLVKNFKMKKREKRRSNSRQFIDGPPGPVKKTCISIGSTVD
 QANESIVAKTTVTPSDGGPIEAVSTIETLPSWTRSRGKSGPLQPVNSDSALNSRPLEPRTDNDLGPQ
 NTGGMRLHDFVSKTVIKPESVPCGKRIKFGKLSLKCRDCRLVSHPECRDRCPICIPPLVGPVKIGEG
 MLADFVSQASPMIPAIIVVSCVNEIEQRGLTEAGLYRISGCDRTVKELKEKFLKVKTVPLLSKVDDIHVIC
 SLLKDFLRNLKEPLLTFWLSKAFMEAAEITDEDNSTAAMYQAVSELPQANRDTLAFMIHLQRVQSQSPDT
 KMDIANLAKVFGPTIVAHTVPNPDVTFMQDIKRLKVVVERLLSLPLEYWNQFMMVDQENIDSQRGNNGS
 TPRTPDVKVSLGPTTPEFQLVKTPLSSLSQRLYNLSKSTPRFGNKSATNLGQQGKFFPAPYLK

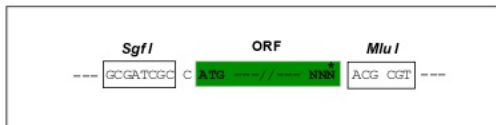
TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:

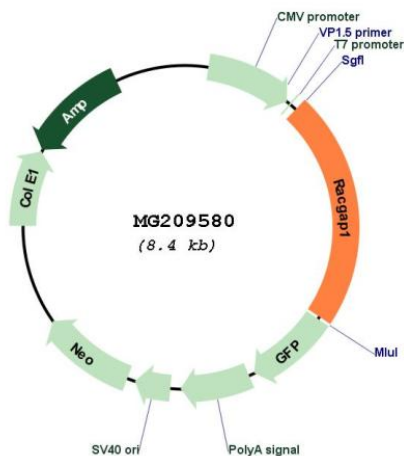


EcoR I *BamH I Kpn I* RBS *Kozac Consensus* *Sgf I* *Asc I*
 CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGGCCAGATCT

Hind III *Nhe I Rsr II* *Mlu I* *Not I* *Xho I* GFP Tag
 CAAGCTTAAGTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC - - - - -
 T R T R P L E M E S D - - - - -

Pme I *Fse I*
 - - - GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT
 - - - E E R V Stop

Plasmid Map:



ACCN: BC010715
 ORF Size: 1886 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:	<ol style="list-style-type: none">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
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]