

## Product datasheet for **MR210704**

### Rasgrp1 (NM\_011246) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Rasgrp1 (NM_011246) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rasgrp1
Synonyms:	Rasgrp
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>MR210704 representing NM\_011246  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGGGAACCTGGGCAAGGCGAGAGAGGCTCCGCGGAAACCTTGCCATGGCTCCAGAGCTGGCCCCAAAG  
CAAGACTAGAGGCCAAATCAACCAACAGCCCTCTCCCTGCCAGCCAGCTTGGCCAGATCACCCAGTT  
CCGAATGATGGTGTCCCTGGGACATTTGGCCAAAGGAGCCAGCCTGGATGATCTTATTGACAGCTGCATT  
CAATCTTTTGTGCGGATGGAAACCTGTGTGGAATAACCAACTGTTACAAGTCATGCTAACCATGCACC  
GGATCATCATCTCCTCAGCCGAGCTGCTACAAAAAGTCATGAATCTATATAAGGATGCCCTGGAAAAAGAA  
TTCTCCAGGAGTTTGCCTGAAGATCTGCTATTTTGTGAGTATTGGATAACAGAATTCTGGATCATGTTT  
AAGATGGATGCCAGCTTGACCAGCACCTGGAAGAGTTCCAAGACCTGGTAAAGCCAATGGTGAGGAGA  
CCCCTGCCACCTCATCGACACGACCCAAATTAATTCTCGAGACTGGTCCAGGAACTGACTCAGAGGAT  
AAAATCGAATACTAGCAAGAAGCGCAAAGTGTCCCTGCTGTTTGACCATCTGGAACCTGAAGAACTGCT  
GAACACCTCACCTACCTTGAGTTCAAGTCTTCCGACGGATATCTTTCTCGATTACCAAAATTACCTTG  
TAAATAGCTGCGTAAAAGAGAACCCACCATGGAGAGGTCATTGCCCTGTGCAATGGCATCTCCCAAGT  
GGTACAACCTGATGGTCTCAGCCGTCCCACCCGAGCTCCGGGCAGAGGCTTTCATCAAGTTTATCCAT  
GTGGCTCAGAACTCCACCAGCTACAGAACTTCAACACGCTGATGGCTGTGATCGGGGACTGTGTACACA  
GCTCCATCTCCAGGCTTAAGGAAACAAGTTCACATGTCCACATGAGATCAATAAGGTTCTGGGCGAGAT  
GACTGAACTGTGCTCCTCCTGCAGAACTATGACAACACAGGCGAGCCTATGGGGAGTGACCCCACTTC  
AAAATCCCATACTGGGTGTGCACCTCAAGGACCTCATATCCCTGTATGAGGCTATGCCCGACTGCTGCA  
AAGATGGGAAGGTGAATGTCCAAAAGCTCCTGGCCCTTACAATCATATCAATGAATGGTCCAGCTGCA  
GGAGATGGCCCCACCATTGGATGCCAACCAAGACTTGGTGCATCTGCTGACGTTATCCCTGGATCTATAC  
TATACAGAAGATGAAATCTATGAGCTTTCCTATGCCCGGAGCCGAGGAACACAGAGCTCCGCCACTGA  
CACCTTGAAGCCACCAGTTGTAGTAGACTGGGCTCTGGAGTGTCTCCCAAACCTGACCCAAAGACCAT  
CAGCAAACACGTCCAAAGGATGGTGGATTCTGTCTTAAAGAACTATGATCTCGACCAGGATGGCTATATC  
TCTCAGGAGGAGTTTGAAGATCGCTGCAAGCTTTCATTTTCTTCTGTGTGATGGACAAAGATAGGG  
AAGGCCTCATCAGCAGAGACGAGATCACGGCTACTTCATGAGGGCCAGCTCCATCTATTCCAAGCTGGG  
CCTGGGCTTTCACACAACCTTCAAGAAACCCTTACCTGAAGCCACCTTCTGTGACAACCTGTGCTGGC  
TTTCTCTGGGCGTGATCAAGCAAGGCTATCGCTGTAAGACTGCGGGATGAACTGCCACAAACAGTGCA  
AAGACCTGGTGGTGTTCGAGTGCAAGAAGCGAATCAAGAGCCAGCAATATCCACAGAGAACATCAGCTC  
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TTCATTTTCCAAAACGGAGAGATTGTGGACCACAGTGAGGAGAGCAAGGATAGGACCATCATGCTCCTCG  
GAGTGTCTCCAGAAAAATTCAGTTCCGGCTGAAGAGGACTGTTGCCACAAGAGCACCCAAACAGAATC  
GTTCCCGTGGGTTGGTGGCGAGACGACCCTGGTCACTTTGTGCTGTCTTCTCCAAGGAAGTCGGCGCAG  
GGCGCTCTTTATGTGCACAGTCCAGCATCTCCATGCCCCAGCCAGCACTGGTCCGAAAGCGGGCATTTCG  
TCAAGTGGGAGAACAAAGAGTCCCTTATAAAACCAAAACCAGAACTTACCTCCGGCTCCGGACCTACCA  
AGAACTGGAACAGGAAATAAATACCCTGAAAGCAGATAACGATGCTCTGAAGATCCAACCTGAAGTACGCA  
CAGAAGAAAAATAGAATCCCTGCAGCTTGGGAAAAGCAATCATGTCTTAGCCAGATGGACCACGGTGATA  
GTGCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR210704 representing NM\_011246  
Red=Cloning site Green=Tags(s)

MGTLGKAREAPRKPC HGSRAGPKARLEAKSTNSPLPAQPSLAQITQFRMMVSLGHLAKGASLDDLIDSCI  
QSFADAGNLCRNNQLLQVMLTMHRIIISSAELLQKVMNL YKDALEKNSPGVCLKICYFVRYWITEFWIMF  
KMDASLTSTMEEFQDLVKANGEEETHCHLIDTTQINSRDWSRKL TQRIKSNTSKKRKVSLLFDHLEPEELS  
EHLTYLEFKSFRRISFSDYQNYLVNSCVKENPTMERSIALCNGISQWVQLMVL SRPTPQLRAEVFIKFIH  
VAQKLHQLQNFNTLMAVIGGLCHSSISRLKETSSHVPHEINKVLGEMTELLSSCRNYDNYRRAYGECTHF  
KIPILGVHLKDLISL YEAMPDYLEDGKVNQKLLALYNHINELVQLQEMAPPLDANKDLVHLLTLSLDLY  
YTEDEIYELSYAREPRNHRAPPLTPSKPPVVVDWASGVSPKDPKTISKHVQRMVDSVFKNYDLDDQDGYI  
SQEEFEKIAASF PFCVMDKDREGLISRDEITAYFMRASSIYSKLGFGPHNFQETTYLKPTFCDNACAG  
FLWGVIKQGYRCKDCGMNCHKQCKDLVVFECCKRIKSPAISTENISSVPMSTLCPLGTDLLHAPEEGS  
FIFQNGEIVDHSEESKDRTIMLLGVSSQKISVRLKRTVAHKSTQTESFPWVGGETTPGHFVLSPPRKSQAQ  
GALYVHSPASPCPSPALVRKRAFVKWENKESLIKPKPELHLRLRTYQELEQEINTLKADNDALKIQLKYA  
QKKIESLQLGKSNHVLAQMDHGDSA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9047\\_e04.zip](https://cdn.origene.com/chromatograms/mm9047_e04.zip)

**Restriction Sites:** Sgfl-Mlul

## Cloning Scheme:



ACCN: NM\_011246

ORF Size: 2385 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\\_011246.3](#)

**RefSeq Size:** 5155 bp

**RefSeq ORF:** 2388 bp

**Locus ID:** 19419

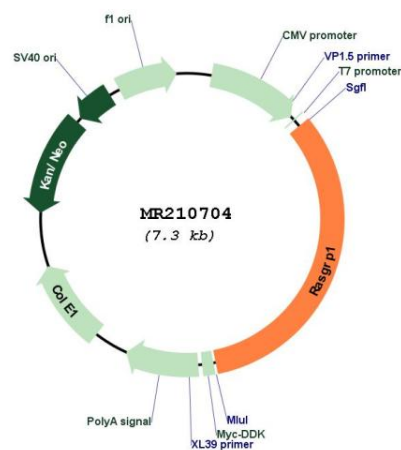
**UniProt ID:** [Q9Z1S3](#)

**Cytogenetics:** 2 59.19 cM

**MW:** 90.8 kDa

**Gene Summary:** Functions as a calcium- and diacylglycerol (DAG)-regulated nucleotide exchange factor specifically activating Ras through the exchange of bound GDP for GTP. Activates the Erk/MAP kinase cascade. Regulates T-cell/B-cell development, homeostasis and differentiation by coupling T-lymphocyte/B-lymphocyte antigen receptors to Ras. Regulates NK cell cytotoxicity and ITAM-dependent cytokine production by activation of Ras-mediated ERK and JNK pathways (By similarity). Functions in mast cell degranulation and cytokine secretion, regulating FcERI-evoked allergic responses (PubMed:17190838). May also function in differentiation of other cell types. Proto-oncogene, which promotes T-cell lymphomagenesis when its expression is deregulated (PubMed:15829980, PubMed:17210708).[UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for MR210704