

## Product datasheet for MR211388

### Arhgef2 (NM\_008487) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Arhgef2 (NM_008487) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Arhgef2
Synonyms:	AA408978; GEF; GEF-H1; GEFH1; Lbcl1; Lfc; LFP40; mKIAA0651; P40
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR211388 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTCGGATCGAATCCCTCACTCGCGCGGGATCGACCGGAGCAAGGAGCAGGCAACCAAGACCCGGG  
AAAAGGAGAAGATGAAGGAAGCTAAAGATGCCCGCTATACCAACGGCCACCTCTTACCACCATCTCCGT  
CTCCGGCATGACCATGTGCTATGCCTGTAACAAGAGCATCACAGCCAAGGAAGCCCTCATTTGTCCTACA  
TGTAACGTGACCATCCACAACCGCTGTAAGACACCCTGGCCAACTGTACCAAGGTCAAGCAGAAGCAAC  
AGAAAGCTGCACTGCTGAGGAACAACACTGCTTTGCAGTCTGTCTCCCTTCGAAGTAAGACGACCACCAG  
AGAGCGGCCAACGCTGCCATTTACCCTCCGACAGCTTCGGCAGTCCCTCCTGGGTTCTCGGCGGGGC  
CTCTCCTCCTTATCTTTGGCCAAAAGTGTTCCTACTACCAACATTGCTGGACATTTCAATGATGAGTCTC  
CTCTGGGGCTGCGTCAGATCCTCTCCAGTCCACAGACTCCCTCAACATGCGGAACCGAACCCCTGTCCGT  
GGAATCCCTTATTGATGAAGGTGTAGAAGTGTCTACAATGAGCTGATGAGCGACTTTGAGATGGATGAG  
AAGGACTTTGAGGCGGATTTGGAGCCTTGCCGTGGACAGCAGCTTCTGCAGCAGCACAAAAGGAAG  
TGATGAAGAAGCAAGATGTCATCTATGAGCTGATCCAGACAGAGCTGCACCACGTGAGAACCTTGAAGAT  
TATGACCCGCCTCTTTCGCACTGGGATGCTGGAAGAGTTGCAGATGGAGCCAGAAGTGGTCCAGGGCCTG  
TTCCCTGCGTGGATGAACCTCAGTGACATTCACACAGTTTCCTTAATCAGCTTCTGGAACGGCGGGCC  
AGGCTCTATGTCCAGGCAGCACCCGGAACCTTGTTCATCCATCGTTTGGGTGACTTGCTCATCAGTCAATT  
CTCAGGTTCCAATGCTGAGCAGATGCGCAAGACCTACTCAGAGTTCTGCAGCCGCCACACCAAGGCCTTA  
AAGCTCTATAAGGAGCTGTATGCTCGAGACAAACGCTTCCAACAGTTTCATCCGAAAAATGACCCGCTCAG  
CTGTGTTGAAGCGGCATGGAGTTCAGGAATGCATTCTCCTGGTACTCAGCGGATCACCAATACCCGTG  
GCTCATCAACCGAATCCTGCAGAATCCACGGGGTTGAAGAAGAGTACCAAGACTTGGCGTCAGCCCTA  
GGACTAGTGAAGGAGTTGTTGTCCAATGTGGACCAGGATGTGCACGAGCTGGAGAAAGAGGCCCGCTGC  
AGGAGATTTACAACCGAATGGATCCCGGGCTCAGACCCCGTACCTGGCAAGGGCCCTTCGGCCGAGA  
TGAACCTTTACGGAGAAAATTATCCATGAAGGCTGCCTGCTGGAAGACAGCCACAGGCCGCTTCAA



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GATGTCCTGTTGCTGCTGATGACAGACGTGCTCGTGTTCCTCCAGGAAAAGGACCAGAAATACATTTTCA  
 CATCCCTGGACAAGCCCTCAGTGGTGTCTTGCAGAACCTCATCGTAAGAGACATAGCCAACCAGGCGAA  
 AGGGATGTTTCTGATTAGTTCTGGACCGCTGAGATGTATGAGGTGCATGCGGCGTCCCAGACGACCGG  
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 AGACAGAGGATAAGGCGTATCTCCGAGGATCAAGACGAACTGCAGCAGAAAAACCAGGCGCTAGTGGA  
 GGTGCTACAGAAGAATGTTGAGCTGTTGCCGAGATGGTCCACTCCAGGCCTAAAGGCTGGCTTCGTT  
 GGAATGCCCCACCCGCCCTGCCAGGGGCTTTCCGTCTTGAGTCTTTGAGTCCCTCCGAGGCGAGC  
 GCCTGCTAAAGGATGCCCTCCGTGAAGTGAAGGCCTGAAAGACCTGCTGTTGGGCCATGTGTGGACCT  
 GCCAACGACATCCCAGAACAGCCTTACCCTGGACTCTGACAGCGGTAGCTGTCTGGGGTCACTGCC  
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 ATCGGAATGGAATCAGTTGAGGTACCACAGGAGGAGGTGTACAGCCATTGATCAATCTTTATGGACT  
 TCTACATGGCCTGCAGGCTGTTGTGGTCCAGCAGGAAAGACTGATGGAAGCCCTGTTCCCTGAGGGCCCT  
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 AGCGAGCAAGCCCGGCCCTGCTGGAGCGGAGGCTGAAGAGATCCGCCGCAGCTTGCAGCCTTGGGCC  
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 AGCGGGGACGCTTTATACTTGAGCTTCAATCCCCCAGCCAGTGCAGGCCATGACCGCCTGGATTTG  
 CCTGTGACTGTTGTTCCCTCCACCGACCTTTGATGACCGAGAGGCGCAAGAATTGGTAGCCCGGAGG  
 ATCGACTGCAGGACAGCAGTGCACCTGATACTGGTAGTGAGGAGGAAGTCAAGTCCGCTGTCTCCACC  
 TCACAGTCTCGAGACTTACCCGAATGCAGGACATTCTGAAGAGACAGAAAGCCGAGATGGGGAGCCC  
 ACAGCTTCAGAGAGC

ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR211388 protein sequence  
 Red=Cloning site Green=Tags(s)

MSRIESLTRARIDRSKEQATKTREKEMKEAKDARYTNGHLFTTISVSGMTMCYACNKSI TAKEALICPT  
 CNVTIHNRCCKDLANCTKVQKQKAALLRNNTALQSVSLRSKTTTRERPTSAIYPSDSFRQSLLGSRRG  
 LSSL SLAKSVSTNIAGHFNDESPLGLRQILSQSTDLSLNMNRNRLSVESLIDEGVEVFYNELMSDFEMDE  
 KDFEADSWSLAVDSSFLQHKKEVMKKQDVIYELIQTELHHVRTLKIMTRLFRTGMLEELQMEPEVVQGL  
 FPCVDELSDIHRFLNQLLERRRQALCPGSTRNFVIHRLGDLLISQFSGSNAEQMRKTYSEFCRHTKAL  
 KLYKEL YARDKRFQQFIRKMTRSAVLKRHGVQECILLVTQRITKYVPLINRILQNSHGVEEYQDLASAL  
 GLVKELL SNVDQDVHELEKEARLQEIYNRMDPRAQTPVPGKPGFGRDELLRRKLIHEGCLLWKTATGRFK  
 DVLLLLMTDVLVFLQEKDQKYIFTSLDKPSVVS LQNLIVRDIANQAKGMFLISSGPPMEYEVHAASRDDR  
 TTWIRVIQQSVRLCPSREDFPLIETEDKAYLRRIKTKLQKQNALVELLQKNVELFAEMVHFQALKAGFV  
 GMPPPALPRGLFRLESFESLRGERLLKDALREVEGLKDLLGPCVDLPTTSREPALPLDSDSGSCPVT  
 NGEARTFNGSIELCRADSDSSQKDRNGNQLRSPQEEVLQPLINLYGLLHGLQAVVVQQRERLMEALFPEGP  
 ERWEKLSRANSRDGEAGRAAVASVTPEKQATELALLQRQHTLLQEELRRCQRLGEERATEAGSLEARLRE  
 SEQARALLEREAEERRQLAALGQNEPLPAEAPWARRPLDPRRSLPAGDALYLSFNPPQPSRGHDRLDL  
 PVTVRSLSLHRPFDDREAQELGSPEDRLQDSSDPDTGSEEEVSSRLSPPHSPRDFTRMQDIPETESRDGEP  
 TASES

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

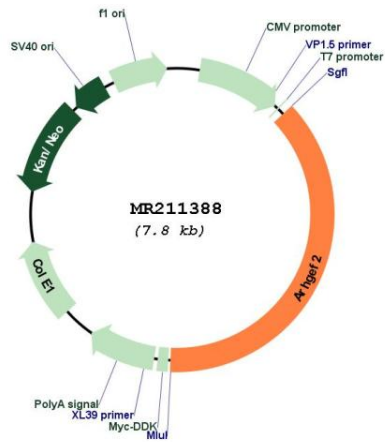
**Restriction Sites:**

Sgfl-MluI



<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_008487.2</a></u> , <u><a href="#">NM_008487.3</a></u> , <u><a href="#">NP_032513.2</a></u>
<b>RefSeq Size:</b>	4300 bp
<b>RefSeq ORF:</b>	2958 bp
<b>Locus ID:</b>	16800
<b>UniProt ID:</b>	<u><a href="#">Q60875</a></u>
<b>Cytogenetics:</b>	3 F1
<b>MW:</b>	111.9 kDa
<b>Gene Summary:</b>	Activates Rho-GTPases by promoting the exchange of GDP for GTP. May be involved in epithelial barrier permeability, cell motility and polarization, dendritic spine morphology, antigen presentation, leukemic cell differentiation, cell cycle regulation, innate immune response, and cancer. Binds Rac-GTPases, but does not seem to promote nucleotide exchange activity toward Rac-GTPases. May stimulate instead the cortical activity of Rac. Inactive toward CDC42, TC10, or Ras-GTPases. Forms an intracellular sensing system along with NOD1 for the detection of microbial effectors during cell invasion by pathogens. Involved in innate immune signaling transduction pathway promoting cytokine IL6/interleukin-6 and TNF-alpha secretion in macrophage upon stimulation by bacterial peptidoglycans; acts as a signaling intermediate between NOD2 receptor and RIPK2 kinase. Contributes to the tyrosine phosphorylation of RIPK2 through Src tyrosine kinase leading to NF-kappaB activation by NOD2. Overexpression activates Rho-, but not Rac-GTPases, and increases paracellular permeability (By similarity). Involved in neuronal progenitor cell division and differentiation (PubMed:28453519). Involved in the migration of precerebellar neurons (PubMed:28453519). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR211388