

## Product datasheet for **RR213619**

### Mapkap1 (NM\_001011964) Rat Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mapkap1 (NM_001011964) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mapkap1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RR213619 representing NM\_001011964  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCTTCTGGACAATCCAATATCATTCTAGCTCATATTCGACAGTCACATGTGACCAGTGATGACA  
 CGGAATGTGTGAGATGGTTCTCATTGATCATGACGTTGACCTAGAGAAGACTCATCCTCCGTCAGTGCC  
 TGGAGACAGTGGGTCAGAAGTTCAGGGAAGCAGTGGTGAGACGCAGGGCTACATATACGCCCACTGTGT  
 GATATTACCTCGAGCTGGGACTTTGGTATTAGAAGACGCTCAAACACAGCTCAAAGATTAGAACGACTCC  
 GCAAAGAGAGACAAAACAGATCAAATGCAAAAATATTCAAGTGGAAAGAAAGAAATCTAAACAATCAGC  
 CCAGGAGTTAAAGTCACTGTTTGAATAAATCCCTCAAAGAGAAACCTCAAAGTTCGGGCAAGCAGTCC  
 ATATTGTCTGTGCGCCTGGAACAGTGCCTCTGCAGCTGAATAACCCCTTAATGAGTACTCCAAGTTTG  
 ATGGCAAGGGTCACTGTGGTACAACGCAAGAAGATCGACGCTACCTCCCCCTGCACTCAAGCCA  
 GGACAGACTGCTCCAATGACTGTGGTACCATGGCCAGCGCCAGGGTGCAGGACCTCATCGGGCTCATC  
 TGTGGCAGTACAGAGTGAAGGACGGGAGCCAAAGCTCAATGACAACGTCAGTGCTACTGCTGCATA  
 TTGCTGAGGATGATGGGGAGGTGGACACGGATTTCCACCCTGGATTCCAATGAACCCATTCAAGTT  
 TGGCTTCACTTTGGCCCTGGTTGAAAAGTACTCTTCCCTGGTCTGACCTCCAAAGAGTCGCTCTTT  
 GTTCGAATAAATGCTGCCATGGGTTCTCCCTCATCCAGTGGACAACACGAAGGTCACCATGAAGGAGA  
 TCTTACTCAAGGCACTGAAACGAAGAAAAGGGTCCCAGAAAATTCAGGCCCTCAGTACCGCCTGGAGAA  
 GCAGAGCGAGCCTAACATCGGTGTGGACCTGGAGAGCACGCTGGAGAGCCAGAAATGCCTGGGAGTTCTGC  
 CTGGTTCGAGAGAACAGTTCAAGGGCAGACGGAGTTTTTCGAGGAGGATTCACAAATTGACATTGCTACAG  
 TGCAGGATATGCTTAGCAGCCACCATTAAAGTCATTCAAAGTCAGCATGATCCACAGACTGCGGTTCC  
 AACTGACGTGCAGTTAGGTATCTCTGGAGACAAAGTGGAGATAGACCCTGTTACGAATCAGAAAGCCAGC  
 ACTAAGTTTTGGATTAAGCAGAAGCCATCTCAATCGATTGTGACCTGCTCTGTGCTGTGACCTTGCCG  
 AGGAGAAGAGCCCAGTCACGGGCTTTAAGCTCACGTATCTAAGCAGTCACGACTATAAGCATCTCTA  
 CTTGAGTCCGACGCAGTACCCTCAGTGAAATCGTGCTCAAGGTTAACTACATCTGGAGTACAGAGCA  
 AGCACTGCCCGTCTGACTATTTTGTCAAAAACAAGAAAACCTGAACAGGCGGACGAGCTTCAGCTTCC  
 AGAAGGAGAAGAAATCAGGGCAGCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RR213619 representing NM\_001011964  
 Red=Cloning site Green=Tags(s)

MAFLDNPTIILAHIRQSHVTSDDTGMCEMVLIDHDVDLEKTHPPSVPGDSGSEVQGSSETQGYIYAQSV  
 DITSSWDFGIRRRSNTAQRLELRKERQNIKCKNIQWKERNKQSAQELKSLFEKKSLEKPPSSGKQS  
 ILSVRLEQCPLQLNPNFNEYSKFDGKGHVGTATKKIDVYLPLHSSQDRLLPMTVVMTASARVQDLIGLI  
 CWQYTSEGREPKLNDNVSAyclHIAEDDGEVDTFPPLDSNEPIHKFGFSTLALVEKYSSPGLTSKESLF  
 VRINAAGHGFSLIQVDNKTVMKEILLKALKRRKGSQKISGPQYRLEKQSEPNIGVDLESTLESQNAWEFC  
 LVRENSSRADGVFEEDSQIDIATVQDMLSSHHYKSFKVSMIHRLRFTTDVQLGISGDKVEIDPVTNQKAS  
 TKFWIKQKPI SIDCDLLCACDLAEEKSPSHAVFKLTYLSSHDKHLVYFESDAATVSEIVLKVNYILESRA  
 STARADYFAQKQRKLNRRTSFSFQKEKKSQQ

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001011964

**ORF Size:** 1566 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\\_001011964.1](#), [NP\\_001011964.1](#)

**RefSeq Size:** 2400 bp

**RefSeq ORF:** 1569 bp

**Locus ID:** 296648

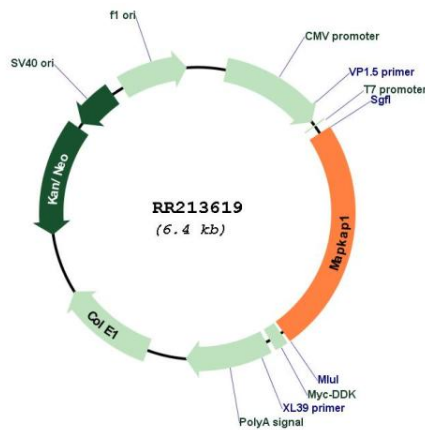
**UniProt ID:** [Q6AYF1](#)

**Cytogenetics:** 3p11

**MW:** 59 kDa

**Gene Summary:** Subunit of mTORC2, which regulates cell growth and survival in response to hormonal signals. mTORC2 is activated by growth factors, but, in contrast to mTORC1, seems to be nutrient-insensitive. mTORC2 seems to function upstream of Rho GTPases to regulate the actin cytoskeleton, probably by activating one or more Rho-type guanine nucleotide exchange factors. mTORC2 promotes the serum-induced formation of stress-fibers or F-actin. mTORC2 plays a critical role in AKT1 'Ser-473' phosphorylation, which may facilitate the phosphorylation of the activation loop of AKT1 on 'Thr-308' by PDK1 which is a prerequisite for full activation. mTORC2 regulates the phosphorylation of SGK1 at 'Ser-421'. mTORC2 also modulates the phosphorylation of PRKCA on 'Ser-657'. Within mTORC2, MAPKAP1 is required for complex formation and mTORC2 kinase activity. MAPKAP1 inhibits MAP3K2 by preventing its dimerization and autophosphorylation. Inhibits HRAS and KRAS signaling. Enhances osmotic stress-induced phosphorylation of ATF2 and ATF2-mediated transcription. Involved in ciliogenesis, regulates cilia length through its interaction with CCDC28B independently of mTORC2 complex (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for RR213619