

Product datasheet for **MC227068**

Mapkap1 (NM_001290626) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Mapkap1 (NM_001290626) Mouse Untagged Clone
Tag: Tag Free
Symbol: Mapkap1
Synonyms: AI591529; D230039K05Rik; Sin1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC227068 representing NM_001290626
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGACCGTGGTGACCATGGCCAGCGCCAGGGTGCAGGACCTCATCGGGCTCATCTGTTGGCAGTACCGA
 GTGAAGGACGGGAGCCGAAGCTCAATGACAATGTCAGTGCCTACTGCCTGCATATTGCTGAGGATGATGG
 GGAGGTCGACACGGATTTCCGCCACTGGATTCCAATGAGCCATTGATAAGTTTGGCTTCAGTACTTTG
 GCCTGGTTGAAAAATCCTCTCCTGGTCTGACCTCCAAGAGTCGCTCTTTGTTGCAATAAATGCTG
 CTCATGGATTCTCCCTTATCCAAGTAGACAACACAAAGGTCACCATGAAGGAGATCTTGCTCAAGGCAGT
 GAAAAGAAGAAAAGGATCCCAGAAAATTCAGGCCCTCAGTACCGCCTGGAGAAGCAGAGTGAGCCCTAAC
 ATCGCTGTGGACCTGGAGAGCAGCTGGAGAGCCAGAACGCTGGGAGTTCTGCCTGGTTCGCGAGAACA
 GTTCAAGGGCAGACGGAGTTTTCGAGGAGGATTCACAAATTGACATCGCTACAGTACAGGATATGCTTAG
 CAGCCACCATTACAAGTCATTCAAAGTCAGCATGATCCACAGACTGCGATTACAGCAGGATGTGCAGTTA
 GGATCTCTGGAGACAAAGTAGAGATAGACCCTGTTACGAATCAGAAAGCCAGCACTAAGTTTTGGATTA
 AGCAGAAACCCATCTCAATCGATTGTGACCTGCTGTGCCTGTGACCTTGCCGAGGAGAAGAGCCCCAG
 TCACGCGGTGTTAAGCTCACGTATCTAAGCAGCCATGACTACAAGCACCTGTACTTCGAGTCCGACGCA
 GCCACAGTCAGTGAGATCGTGCTCAAGGTTAACTACATCCTGGAATCACGAGCGAGCACTGCCCGAGCTG
 ATTATCTTGCTCAAAAACAAAGAAAAGTGAACAGGCGAACAAGCTTCAGCTTCCAGAAGGAGAAGAAATC
 AGGGCAGCAGTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001290626



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Insert Size:	993 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
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:	<u>NM_001290626.1</u> , <u>NP_001277555.1</u>
RefSeq Size:	3124 bp
RefSeq ORF:	993 bp
Locus ID:	227743
UniProt ID:	<u>Q8BKH7</u>
Cytogenetics:	2 B

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-422'. 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. Isoform 1 is involved in ciliogenesis, regulates cilia length through its interaction with CCDC28B independently of mTORC2 complex.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) lacks an alternate exon and it thus differs in its 5' UTR, lacks a portion of the 5' coding region and initiates translation at a downstream in-frame start codon compared to variant 1. The encoded isoform (b) is shorter at the N-terminus compared to isoform a. Variants 3 and 5 both encode the same isoform (b).