

Product datasheet for **MC228762**

Rps6ka1 (NM_001285506) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rps6ka1 (NM_001285506) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rps6ka1
Synonyms:	Mapkapk-1a; p90-Rsk1; p90rsk; p90Rsk1; p90S6K; Rsk; Rsk-1; Rsk1; S6K-alpha-1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC228762 representing NM_001285506
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCAAACACCCGCCGATTTCCCTAGGGTTGAGAGAGACTCCGGCTTCTATCCCAGAAAGGATGAGGCCA
 TCCTCAAGGAGATCTCCATCACACACCAGTCAAGGCTGGCTCTGAGAAGGCCGATCCATCCCAGTTTGA
 GCTCCTCAAGTTCTGGGCCAAGGATCCTTTGGCAAAGTCTTCTGGTACGCAAGGTACCCCGCCGTGAC
 AGTGGGCACTTGTATGCCATGAAAGTATTAAGAAGGCCACGCTGAAAGTGCGTGACCGTGTTCGGACCA
 AGATGGAGAGAGACATCCTCGCTGACGTGAACCACCCGTTCTGGTGAAGCTACATTATGCCTCCAGAC
 CGAGGGCAAGCTCTATCTTATTCTGGACTTCTGCGTGGTGGAGACCTGTTACACACGGCTCTCAAAGGAG
 GTCATGTTTACAGAGGAGGATGTGAAGTTTACCTGGCTGAGCTGGCACTGGCCCTGGACCCTGCACA
 GCTTGGGCATTATTTACAGAGACCTCAAGCCTGAGAATATCCTTTGGATGAGGAGGGCCACATCAAAC
 CACTGACTTTGGCCTGAGCAAGGAGGCCATAGACCATGAGAAGAAGGCTTACTCCTTCTGCGGGACAGTG
 GAGTACATGGCGCCCGAGGTTGTCAACCGCCAGGGTACACCCACAGTGCAGACTGGTGGTCTATGGGG
 TGCTGATGTTTGAGATGCTGACGGGCTCCCTGCCCTTCCAGGGGAAGGACCGGAAGGAGACCATGACCTT
 GATTTTGAAGGCGAAGCTAGGCATGCCCGAGTTTCTGAGCACGGAAGCCAGAGCCTCTGCGGGCCCTG
 TTCAAGAGGAATCCTGCCAATCGGCTTGGCTCGGGCCCTGATGGGGCAGAGGAAATTAAGAGACATATCT
 TCTACTCCACCATTGACTGGAATAAGCTTACCGGCGTGAGATCAAGCCCCCTTCAAGCCGGCTGTGGC
 CCAGCCGACGACACCTTCTACTTTGATACCGAGTTACGTCACGCACACCCAGGGATTCGCCAGGCATC
 CCTCCCAGTGTGGTCCCATCAGCTGTTCCGTGGCTTACGCTTCGTGGCACTGGTCTGATGGAGGACG
 ACGGCAAGCCTCGGACCACTCAGGCCCCCTACACTCGTGGTACAGAACTCCACGGGAAGAACTGGT
 TTTCAAGTACGGCTACGTAGTAAAGGAGACGATCGGCGTGGGCTCCTACTCTGTGTGAAGCGTTGTGTC
 CACAAGGCCACCAACATGGAGTATGCTGTCAAGGTCATCGACAAGAGCAAAGAGATCCCTCAGAAGAGA
 TTGAGATTCTTCTGCGGTATGGCCAGCACCCCAACATCATCACCTGAAAGATGTGTACGATGATGGTAA
 GCACGTGTACCTGGTACAGAGCTGATGAGGGGCGGCGAGCTGCTGGATAAGATCCTACGGCAGAAATTC
 TTCTCAGAGCGGGAGGCCAGCTTCTGCTGCACACGATCAGCAAGACTGTGGAATACTTGCACTCTCAAG
 GGGTTGTCCACAGAGATCTAAACCCAGTAACATCCTCTATGTGGATGAGTCTGGGAACCCCGAGTGCCT
 GCGCATCTGCGACTTTGGCTTTGCCAAGCAGCTACGGGCCGAGAACGGACTCCTCATGACACCTTGCTAC
 ACAGCCAACTTTGTGGCACCTGAGGTGCTGAAGCGCCAGGGCTACGATGAAGGCTGTGACATATGGAGCC
 TGGGCATTCTGCTGTACAGATGCTGGCAGGATACACTCCATTTGCCAATGGGCCAGTGACACCCAGAG
 GGAGATCCTCACCCGGATCGGCAGCGGGAAGTTACCCCTCAGTGGGGGAAACTGGAACACGGTTTCAGAG
 ACAGCCAAAGGACTTGGTATCTAAGATGCTGCATGTGGACCCACCAGCGCCTCACAGCCAAAGCAGGTCC
 TGCAGCACCCATGGATCACCCAGAAAGACAAGCTTCCCCAGAGCCAGTTGTCCCACCAAGACCTGCAGCT
 CGTGAAGGGAGCCATGGCGGCTACATACTCTGCTCTCAATAGCTCCAACCCACCCCTCAGCTCAAGCCA
 ATTGAGTCGTCTATCCTGGCCAGCGGCGGGTGAAGGAGCTGCCATCCACCACCTGTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001285506
Insert Size: 2160 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_001285506.1</u> , <u>NP_001272435.1</u>
RefSeq Size:	3002 bp
RefSeq ORF:	2160 bp
Locus ID:	20111
Cytogenetics:	4 D2.3

Gene Summary:

Serine/threonine-protein kinase that acts downstream of ERK (MAPK1/ERK2 and MAPK3/ERK1) signaling and mediates mitogenic and stress-induced activation of the transcription factors CREB1, ETV1/ER81 and NR4A1/NUR77, regulates translation through RPS6 and EIF4B phosphorylation, and mediates cellular proliferation, survival, and differentiation by modulating mTOR signaling and repressing pro-apoptotic function of BAD and DAPK1. In fibroblast, is required for EGF-stimulated phosphorylation of CREB1, which results in the subsequent transcriptional activation of several immediate-early genes. In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP. Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity. Phosphorylates RPS6 in response to serum or EGF via an mTOR-independent mechanism and promotes translation initiation by facilitating assembly of the pre-initiation complex. In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap-dependent translation. Is involved in the mTOR nutrient-sensing pathway by directly phosphorylating TSC2 at 'Ser-1798', which potently inhibits TSC2 ability to suppress mTOR signaling, and mediates phosphorylation of RPTOR, which regulates mTORC1 activity and may promote rapamycin-sensitive signaling independently of the PI3K/AKT pathway. Mediates cell survival by phosphorylating the pro-apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function. Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl4). Mediates induction of hepatocyte proliferation by TGFA through phosphorylation of CEBPB (PubMed:10635333). Is involved in cell cycle regulation by phosphorylating the CDK inhibitor CDKN1B, which promotes CDKN1B association with 14-3-3 proteins and prevents its translocation to the nucleus and inhibition of G1 progression (By similarity). Phosphorylates EPHA2 at 'Ser-897', the RPS6KA-EPHA2 signaling pathway controls cell migration (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) contains alternate 5' exon structure and it thus differs in the 5' UTR and 5' coding region, and it initiates translation at an alternate start codon, compared to variant 1. The encoded isoform (c) has a distinct N-terminus and is shorter than isoform a.