

Product datasheet for **MC228778**

Rps6ka1 (NM_001285505) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rps6ka1 (NM_001285505) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rps6ka1
Synonyms:	Mapkapk-1a; p90-Rsk1; p90rsk; p90Rsk1; p90S6K; Rsk; Rsk-1; Rsk1; S6K-alpha-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

Fully Sequenced ORF: >MC228778 representing NM_001285505
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCCGCTCGCCAGCTCAAGGAGCCCTGGCCGCTCATGGAGCTGGTGGCCGCTGGACCCGGAGAATGGCC
 AGACTTCAGGGGAAGAAGCTGGACTTCAGCCATCCAAGGATGAGGCCATCCTCAAGGAGATCTCCATCAC
 ACCACGCTCAAGGCTGGCTCTGAGAAGCCGATCCATCCAGTTTGAGCTCCTCAAGTTCTGGGCCAA
 GGATCCTTTGGCAAAGTCTTCTGGTACGCAAGGTCAACCCGCGCTGACAGTGGGCACTTGTATGCCATGA
 AAGTATTAAGAAGGCCACGCTGAAAGTGCCTGACCGTGTTCGGACCAAGATGGAGAGACATCCTCGC
 TGACGTGAACCCCGTTCTGGTGAAGTACATTATGCCTCCAGACCGAGGGCAAGCTCTATCTTATT
 CTGGACTTCTGCGTGGTGGAGACCTGTTACACGGCTCTCAAAGGAGGTATGTTTACAGAGGAGGATG
 TGAAGTTTACCTGGCTGAGCTGGCACTGGCCCTGGACCCTGCACAGCTTGGGCATTATTTACAGAGA
 CCTCAAGCCTGAGAATATCCTTTGGATGAGGAGGGCCACATCAAACCTACTGACTTTGGCCTGAGCAAG
 GAGGCCATAGACCATGAGAAGAAGGCTTACTCCTTCTGCGGGACAGTGGAGTACATGGCGCCCGAGGTTG
 TCAACCGCCAGGGTCAACCCACAGTGCAGACTGGTGGTCTATGGGGTCTGATGGGGAAGGACCGGAA
 GGAGACCATGACCTTGATTTTGAAGGCGAAGCTAGGCATGCCCAAGTTTCTGAGCACGGAAGCCAGAGC
 CTCCTGCGGGCCCTGTTCAAGAGGAATCCTGCCAATCGGCTTGGCTCGGGCCCTGATGGGGCAGAGGAAA
 TTAAGAGACATATCTTCTACTCCACCATGACTGGAATAAGCTCTACCGCGTGAGATCAAGCCCCCTTT
 CAAGCCGGCTGTGGCCAGCCGACGACACCTTCTACTTTGATACCGAGTTCACGTACGCACACCCAGG
 GATTCGCCAGGCATCCCTCCAGTGTGGTGGCCATCAGCTGTTCCGTGGCTTCACTTCTGCTGGCCACTG
 GTCTGATGGAGGACGACGGCAAGCCTCGACCACTCAGGCCCCCTACACTCGTGGTACAGCAACTCCA
 CGGGAAGAACTTGGTTTTCACTGACGGCTACGTAGTAAAGGAGACGATCGGCGTGGGCTCCTACTCTGTG
 TGTAAGCGTTGTGTCCACAAGGCCACCAACATGGAGTATGCTGTCAAGGTATCGACAAGAGCAAAAGAG
 ATCCCTCAGAAGAGATTGAGATTCTTCTGCGGTATGGCCAGCACCCCAACATCATCACCTGAAAGATGT
 GTACGATGATGTAAGCACGTGTACCTGGTACAGAGCTGATGAGGGGCGGCGAGCTGCTGGATAAGATC
 CTACGGCAGAAATTTCTCAGAGCGGGAGGCCAGCTTCTGCTGCACACGATCAGCAAGACTGTGGAAT
 ACTTGCACTCTCAAGGGTTGTCCACAGAGATCTCAAACCCAGTAACATCCTCTATGTGGATGAGTCTGG
 GAACCCCGAGTGCCTGCGCATCTGCGACTTTGGCTTTGCCAAGCAGCTACGGGCCGAGAACGGACTCCTC
 ATGACACCTTGTACACAGCCAACCTTTGTGGCACCTGAGGTGCTGAAGCGCCAGGGCTACGATGAAGGCT
 GTGACATATGGAGCCTGGCATTCTGCTGTACAGGATGCTGGCAGGATACACTCCATTTGCCAATGGGCC
 CAGTGACACCCAGAGGAGATCCTCACCCGGATCGGCAGCGGGAAGTTACCCCTCAGTGGGGGAACTGG
 AACACGGTTTCAGAGACAGCCAAGGACTTGGTATCTAAGATGCTGCATGTGGACCCACAGCGCCTCA
 CAGCCAAGCAGTCTGCAGCACCCATGGATCACCCAGAAAGACAAGCTTCCCCAGAGCCAGTTGTCCCA
 CCAAGACCTGCAGCTCGTGAAGGGAGCCATGGCGGCTACATACTGCTCTCAATAGTCCAAACCCACC
 CCTCAGCTCAAGCCAATTGAGTCGTCTATCCTGGCCAGCGGGGTGAGGAAGTGCATCCACCACCC
 TG**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001285505

Insert Size: 2175 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_001285505.1</u> , <u>NP_001272434.1</u>
RefSeq Size:	3118 bp
RefSeq ORF:	2175 bp
Locus ID:	20111
UniProt ID:	<u>P18653</u>
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 (2) uses an alternate in-frame splice site in the central coding region, compared to variant 1, resulting in an isoform (b) that is shorter than isoform a.