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Product datasheet for MC211336

Rps6kb1 (NM_028259) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rps6kb1 (NM_028259) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rps6kb1
Synonyms:	70kDa; 2610318I15Rik; 4732464A07Rik; AA959758; AI256796; AI314060; p70/85s6k; p70s6k; S6K1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC211336 representing NM_028259 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGAGGCGACGACGGAGGCGGGACGGCTTTTACCTAGCGCCTGACTTCCGACACAGGGAAGCTGAGGACA TGGCAGGAGTGTTTGACATAGACCTGGACCAGCCAGAAGATGCAGGCTCTGAGGATGAGCTGGAGGAGGG GGGTCAGTTAAATGAAAGCATGGACCATGGGGGAGTTGGACCATATGAACTTGGCATGGAACATTGTGAG AAATTTGAAATCTCAGAAACTAGTGTGAACAGAGGGCCAGAAAAAATCAGACCAGAATGTTTTGAGCTAC TTCGGGTACTTGGTAAAGGGGGCTATGGAAAGGTTTTTCAAGTACGAAAAGTAACAGGAGCAAATACTGG GAAGATATTTGCCATGAAGGTGCTTAAAAAGGCAATGATAGTGAGGAATGCTAAGGACACGGCCCACACG AAAGCAGAGCGGAACATTCTGGAGGAAGTGAAACACCCTTTCATTGTGGACCTGATTTATGCCTTTCAGA CCGGAGGAAAGCTCTACCTCATCCTCGAGTATCTCAGTGGAGGAGAACTATTTATGCAGTTAGAAAGAGA GGGAATATTCATGGAAGACACAGCGTGGCCTTGGGTGGACCGCTCTTCACTGCAGAATTTCCTTGAATTG ACTTTCCAGTTCCCAAGGTGCAGTCTTAGGGAGGTGATAACCCTGAACATACATCTGTGGATTGATTTTA TAGCCAGGATGGGATCTGCCCTCCTATTCGCCTTTTCTAACACAGAAGCTGCATTTAAGAGCCTTAGGGA TGAAGTGCCCCTTTTTGGAGGAGGCTCTCTGAGCCCTGTGGAGGCTGTGGTCCTGCTAGCTGTGAAACTG CCTCAGTCCTCTAGGACACACCCTCCATCCTGGAGTAATCTGCAGGATTGCAACATTGTTACACAGCCAG TATTGCAGTGCTTTGTGCTTTTCGAATCCAGACAGGGTTGA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA
Restriction Sites:	SgfI-MluI

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ACCN:	NM_028259
Insert Size:	951 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).
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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_028259.4, NP_082535.1
RefSeq Size:	3283 bp
RefSeq ORF:	951 bp
Locus ID:	72508
Cytogenetics:	11 C

Gene Summary: Serine/threonine-protein kinase that acts downstream of mTOR signaling in response to growth factors and nutrients to promote cell proliferation, cell growth and cell cycle progression. Regulates protein synthesis through phosphorylation of EIF4B, RPS6 and EEF2K, and contributes to cell survival by repressing the pro-apoptotic function of BAD. Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex. Upon mitogenic stimulation, phosphorylation by the mammalian target of rapamycin complex 1 (mTORC1) leads to dissociation from the EIF3 complex and activation. The active form then phosphorylates and activates several substrates in the pre-initiation complex, including the EIF2B complex and the cap-binding complex component EIF4B. Also controls translation initiation by phosphorylating a negative regulator of EIF4A, PDCD4, targeting it for ubiquitination and subsequent proteolysis. Promotes initiation of the pioneer round of protein synthesis by phosphorylating POLDIP3/SKAR. In response to IGF1, activates translation elongation by phosphorylating EEF2 kinase (EEF2K), which leads to its inhibition and thus activation of EEF2. Also plays a role in feedback regulation of mTORC2 by mTORC1 by phosphorylating RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling. Mediates cell survival by phosphorylating the pro-apoptotic protein BAD and suppressing its pro-apoptotic function. Phosphorylates mitochondrial RMP leading to dissociation of a RMP:PPP1CC complex. The free mitochondrial PPP1CC can then dephosphorylate RPS6KB1 at Thr-412, which is proposed to be a negative feedback mechanism for the RPS6KB1 anti-apoptotic function. Mediates TNF-alpha-induced insulin resistance by phosphorylating IRS1 at multiple serine residues, resulting in accelerated degradation of IRS1. In cells lacking functional TSC1-2 complex, constitutively phosphorylates and inhibits GSK3B. May be involved in cytoskeletal rearrangement through binding to neurabin. Phosphorylates and activates the pyrimidine biosynthesis enzyme CAD, downstream of MTOR (By similarity) (PubMed:11493700, PubMed:11500364, PubMed:15060135, PubMed:18952604). Following activation by mTORC1, phosphorylates EPRS and thereby plays a key role in fatty acid uptake by adipocytes and also most probably in interferon-gamma-induced translation inhibition (PubMed:28178239).[UniProtKB/Swiss-Prot Function]