

Product datasheet for **MC225971**

Akt1s1 (NM_001290695) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Akt1s1 (NM_001290695) Mouse Untagged Clone
Tag: Tag Free
Symbol: Akt1s1
Synonyms: 1110012J22Rik; A1227026; Lobe; Lobel; PRAS40
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC225971 representing NM_001290695
Red=Cloning site **Blue**=ORF **Orange**=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGTTAATGCGGGGCACTACCATCTCTTTGCGGGGCACGACGGCGGGGTGCTGGAAAAGCGAAACGGAGA
GAGGAAAAGGTCTCTTCATGATGGATGAGGATGCCACCCTCCAGGACCTGCCCCCTTCTCGGAGTCAGA
CCCGGAGAGCACAGACGACGGCAGCCTGAGCGAGGAGACGCCCGCGGTCCACAGCCTGTCCCCAGCCC
CCGGCCACAGCCCTGCCTACCCAGCAGTATGCCAAGTCTCTGCCCGTGTGGGTGCCAGTGTGGGCCTTCA
AGGAGAAGAGGACAGAAGCCCGATCGTCAGATGAGGAGAATGGCCCGCCCTCTCGCCCCGACCTAGACCG
AATAGCGGCCAGCATGCGCGCGCTGGTGTGCGGGAGGCTGAGGACACCCAGGTCTTCGGGGATCTCCG
CGGCCGCGGCTCAATACCAGCGACTTCCAGAAGCTGAAGCGGAAATATTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001290695
Insert Size: 471 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).



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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_001290695.1</u> , <u>NP_001277624.1</u>
RefSeq Size:	1221 bp
RefSeq ORF:	471 bp
Locus ID:	67605
UniProt ID:	<u>Q9D1F4</u>
Cytogenetics:	7 B3
Gene Summary:	<p>Subunit of mTORC1, which regulates cell growth and survival in response to nutrient and hormonal signals. mTORC1 is activated in response to growth factors or amino acids. Growth factor-stimulated mTORC1 activation involves a AKT1-mediated phosphorylation of TSC1-TSC2, which leads to the activation of the RHEB GTPase that potently activates the protein kinase activity of mTORC1. Amino acid-signaling to mTORC1 requires its relocalization to the lysosomes mediated by the Ragulator complex and the Rag GTPases. Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. mTORC1 phosphorylates EIF4EBP1 and releases it from inhibiting the elongation initiation factor 4E (eIF4E). mTORC1 phosphorylates and activates S6K1 at 'Thr-389', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Within mTORC1, AKT1S1 negatively regulates mTOR activity in a manner that is dependent on its phosphorylation state and binding to 14-3-3. Inhibits RHEB-GTP-dependent mTORC1 activation. Substrate for AKT1 phosphorylation, but can also be activated by AKT1-independent mechanisms. May also play a role in nerve growth factor-mediated neuroprotection.[UniProtKB/Swiss-Prot Function]</p> <p>Transcript Variant: This variant (4) lacks an alternate exon and uses an alternate first exon compared to variant 3. The resulting isoform (c) has a shorter and distinct N-terminus compared to isoform a.</p>