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Product datasheet for MR228987

Akt1s1 (NM_001290694) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Akt1s1 (NM_001290694) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Akt1s1
Synonyms:	1110012J22Rik; AI227026; Lobe; Lobel; PRAS40
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR228987 representing NM_001290694 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACGCAAGAAGCCGCCATGCCTTTTGAGGGCGGCGACGGCGCCTGGCCGGCCATGCTGGCTACGGGCA
CGGCTCGGATGGCGTCTGGGCGGCCAGAGGAACTGTGGGAAGCCGTCGTGGGGGCCGCCGAGCGCTTTCA
GGCCCGCACTGGCACAGAGCTGGTATTACTGACTGCAGCGCCACCGCCGCCGCCCCGCCCTGGACCCTGT
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CGCACAGGGCTGCCACTGCCACCCGACCTCCTGGTCCCCCACCAGCACCACAGCCGCCCAGCCCTGCTCC
TAGTCCACCACCTCGGCCAGCCCTGGCCAGGGAGGATGAGGAGGAAGATGAGGACGAGCCCACTGAAACA
GAGACATCTGGGGAGCGGCTGGGCGGTAGCGATAATGGAGGTCTCTTCATGATGGATGAGGATGCCACCC
TCCAGGACCTGCCCCCCTTCTGCGAGTCAGACCCGGAGAGCACAGACGACGGCAGCCTGAGCGAGGAGAC
GCCCGCCGGTCCCACAGCCTGTCCCCAGCCCCCGGCCACAGCCCTGCCTACCCAGCAGTATGCCAAGTCT
CTGCCCGTGTCGGTGCCAGTGTGGGCCTTCAAGGAGAAGAGGACAGAAGCCCGATCGTCAGATGAGGAGA
ATGGCCCGCCCTCCTCGCCCGACCTAGACCGAATAGCGGCCAGCATGCGCGCGCTGGTGCTGCGGGAGGC
TGAGGACACCCAGGTCTTCGGGGATCTTCCGCGGCCGCGGCTCAATACCAGCGACTTCCAGAAGCTGAAG
CGGAAATAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

View online »

Protein Sequence:

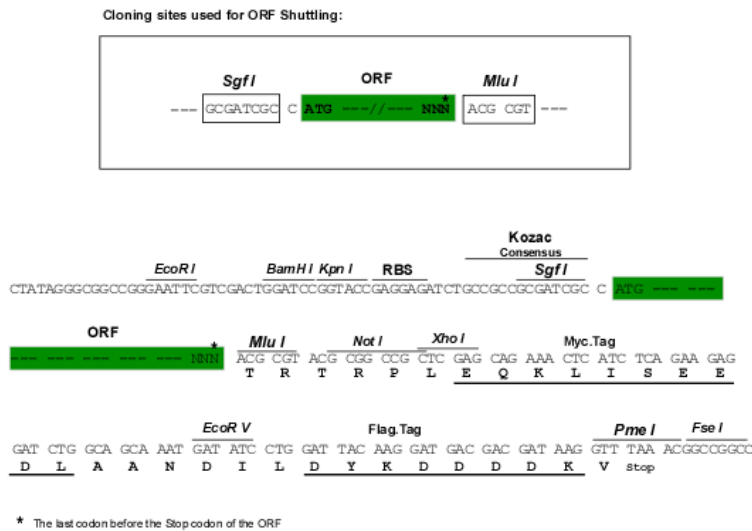>MR228987 representing NM_001290694
Red=Cloning site Green=Tags(s)

MTQEAAMPFEGGDGAWPAMLATGTARMASGRPEELWEAVVGAAERFQARTGTELVLLTAAPPPPPRPGPC
AYAAHGRGALAEAARRCLHDIAQAHRAATATRPPGPPPAPQPPSPAPSPPPRPALAREDEEEDEDEPTET
ETSGERLGGSDNGGLFMMDEDATLQDLPPFCESDPESTDDGSLSEETPAGPTACPQPPATALPTQQYAKS
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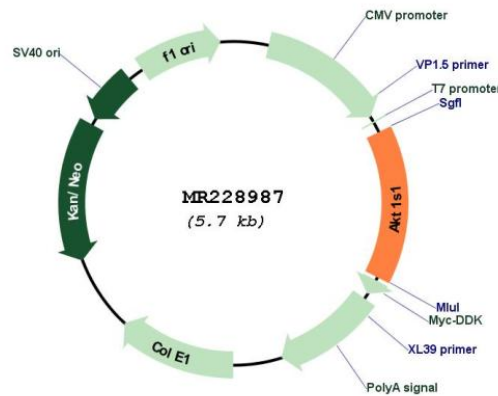RKY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Plasmid Map:

ACCN: NM_001290694

ORF Size: 849 bp

OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
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.
RefSeq:	NM_001290694.1, NP_001277623.1
RefSeq Size:	1857 bp
RefSeq ORF:	852 bp
Locus ID:	67605
UniProt ID:	Q9D1F4
Cytogenetics:	7 B3
MW:	30.6 kDa
Gene Summary:	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]