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Product datasheet for MC210581

Akt1s1 (NM_026270) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Akt1s1 (NM_026270) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Akt1s1
Synonyms:	1110012J22Rik; AI227026; Lobe; Lobel; PRAS40
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC210581 representing NM_026270 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGCGTCTGGGCGGCCAGAGGAACTGTGGGAAGCCGTCGTGGGGGCCGCCGAGCGCTTTCAGGCCCGCA CTGGCACAGAGCTGGTATTACTGACTGCAGCGCCACCGCCGCCGCCCCGCCCTGGACCCTGTGCCTATGC CGCCCATGGCCGCGGAGCCCTGGCAGAGGCGGCCCGACGCTGCCTCCACGACATCGCACAGGCGCACAGG GCTGCCACTGCCACCCGACCTCCTGGTCCCCCACCAGCACCACAGCCGCCCAGCCCTGCTCCTAGTCCAC CACCTCGGCCAGCCCTGGCCAGGGAGGATGAGGAGGAAGATGAGGACGAGCCCACTGAAACAGAGACATC TGGGGAGCGGCTGGGCGGTAGCGATAATGGAGGTCTCTTCATGATGGATGAGGATGCCACCCTCCAGGAC CTGCCCCCCTTCTGCGAGTCAGACCCGGAGAGCACAGACGACGGCAGCCTGAGCGAGGAGACGCCCGCCG GTCCCACAGCCTGTCCCCAGCCCCCGGCCACAGCCCTGCCTACCCAGCAGTATGCCAAGTCTCTGCCCGT GTCGGTGCCAGTGTGGGCCTTCAAGGAGAAGAGGACAGAAGCCCGATCGTCAGATGAGGAGAATGGCCCG CCCTCCTCGCCCGACCTAGACCGAATAGCGGCCAGCATGCGCGCGCTGGTGCTGCGGGAGGCTGAGGACA CCCAGGTCTTCGGGGATCTTCCGCGGCCGCGGCTCAATACCAGCGACTTCCAGAAGCTGAAGCGGAAATA TTAA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA
Restriction Sites:	SgfI-MluI
ACCN:	NM_026270
Insert Size:	774 bp

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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.

RefSeq: NM_026270.4, NP_080546.1

RefSeq Size: 1610 bp

RefSeq ORF: 774 bp

Locus ID: 67605

UniProt ID: Q9D1F4

Cytogenetics: 7 B3

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]
Transcript Variant: This variant (2) contains an alternate first exon compared to variant 3. The resulting isoform (b) is shorter at the N-terminus compared to isoform a. Variants 1 and 2 both encode the same isoform (b).