

S6K1 Antibody
Rabbit mAb
Catalog # AP90364

Specification

S6K1 Antibody - Product Information

Application	WB, IHC, IP
Primary Accession	P23443
Reactivity	Rat
Clonality	Monoclonal

Other Names

EC 2.7.11.1; KS6B1; P70-S6K; RPS6KB1; Ribosomal protein S6 kinase, Ribosomal protein S6 kinase 70kDa polypeptide 1; S6K1; kinase p70S6K; p70-S6K;

Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	59140 Da

S6K1 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human S6K1
Description	This gene encodes a member of the RSK (ribosomal S6 kinase) family of serine/threonine kinases. This kinase contains 2 non-identical kinase catalytic domains and phosphorylates several residues of the S6 ribosomal protein.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

S6K1 Antibody - Protein Information

Name RPS6KB1

Synonyms STK14A

Function

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 (PubMed: [11500364](http://www.uniprot.org/citations/11500364), PubMed: [12801526](http://www.uniprot.org/citations/12801526), PubMed: [14673156](http://www.uniprot.org/citations/14673156), PubMed: [15071500](http://www.uniprot.org/citations/15071500), PubMed: [15341740](http://www.uniprot.org/citations/15341740)),

PubMed: 16286006, PubMed: 17052453, PubMed: 17053147, PubMed: 17936702, PubMed: 18952604, PubMed: 19085255, PubMed: 19720745, PubMed: 19935711, PubMed: 19995915, PubMed: 22017876, PubMed: 23429703, PubMed: 28178239). Regulates protein synthesis through phosphorylation of EIF4B, RPS6 and EEF2K, and contributes to cell survival by repressing the pro-apoptotic function of BAD (PubMed: 11500364, PubMed: 12801526, PubMed: 14673156, PubMed: 15071500, PubMed: 15341740, PubMed: 16286006, PubMed: 17052453, PubMed: 17053147, PubMed: 17936702, PubMed: 18952604, PubMed: 19085255, PubMed: 19720745, PubMed: 19935711, PubMed: 19995915, PubMed: 22017876, PubMed: 23429703, PubMed: 28178239). Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex (PubMed: 16286006). Upon mitogenic stimulation, phosphorylation by the mechanistic target of rapamycin complex 1 (mTORC1) leads to dissociation from the EIF3 complex and activation (PubMed: 16286006). 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 (PubMed: 16286006). Also controls translation initiation by phosphorylating a negative regulator of EIF4A, PDCD4, targeting it for ubiquitination and subsequent proteolysis (PubMed: 17053147). Promotes initiation of the pioneer round of protein synthesis by phosphorylating POLDIP3/SKAR (PubMed: 15341740). In response to IGF1, activates translation elongation by phosphorylating EEF2 kinase (EEF2K), which leads to its inhibition and thus activation of EEF2 (PubMed: 11500364). Also plays a role in feedback regulation of mTORC2 by mTORC1 by phosphorylating RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling (PubMed: 19720745, PubMed: 19935711, PubMed: 19995915). Also involved in feedback regulation of mTORC1 and mTORC2 by phosphorylating DEPTOR (PubMed: 22017876). Mediates cell survival by phosphorylating the pro- apoptotic protein BAD and suppressing its pro-apoptotic function (By similarity). Phosphorylates mitochondrial URI1 leading to dissociation of a URI1-PPP1CC complex (PubMed: 17936702).

target="_blank">17936702). 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 (PubMed:17936702). Mediates TNF-alpha-induced insulin resistance by phosphorylating IRS1 at multiple serine residues, resulting in accelerated degradation of IRS1 (PubMed:18952604). In cells lacking functional TSC1-2 complex, constitutively phosphorylates and inhibits GSK3B (PubMed:17052453). May be involved in cytoskeletal rearrangement through binding to neurabin (By similarity). Phosphorylates and activates the pyrimidine biosynthesis enzyme CAD, downstream of MTOR (PubMed:23429703). 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).

Cellular Location

Synapse, synaptosome. Mitochondrion outer membrane. Mitochondrion. Note=Colocalizes with URI1 at mitochondrion [Isoform Alpha II]: Cytoplasm.

Tissue Location

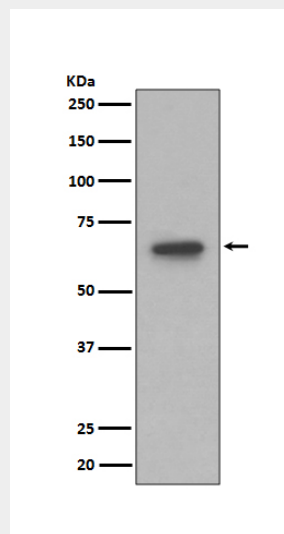
Widely expressed..

S6K1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

S6K1 Antibody - Images



Western blot analysis of S6K1 expression in 293T cell lysate.