

**Phospho-S6K1 (T421 + S424) Antibody**  
Rabbit mAb  
Catalog # AP90305**Specification****Phospho-S6K1 (T421 + S424) Antibody - Product Information**

Application	WB, IP
Primary Accession	<a href="#">P23443</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
EC 2.7.11.1, KS6B1, P70-S6K, RPS6KB1, Ribosomal protein S6 kinase, Ribosomal protein S6 kinase, 70kDa, polypeptide 1, S6K, kinase p70S6K, p70-S6K	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	59140 Da

**Phospho-S6K1 (T421 + S424) Antibody - Additional Information**

Purification	<b>Affinity-chromatography</b>
Immunogen	<b>A synthesized peptide derived from human Phospho-S6K1 (T421 + S424) □ Phospho-S6K1 (T444 + S447)</b>
Description	<b>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.</b>
Storage Condition and Buffer	<b>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.</b>

**Phospho-S6K1 (T421 + S424) 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: <a href="http://www.uniprot.org/citations/15341740" target="\_blank">15341740</a>, PubMed: <a href="http://www.uniprot.org/citations/16286006" target="\_blank">16286006</a>, PubMed: <a href="http://www.uniprot.org/citations/17052453" target="\_blank">17052453</a>, PubMed: <a href="http://www.uniprot.org/citations/17053147" target="\_blank">17053147</a>, PubMed: <a href="http://www.uniprot.org/citations/17936702" target="\_blank">17936702</a>, PubMed: <a href="http://www.uniprot.org/citations/18952604" target="\_blank">18952604</a>, PubMed: <a href="http://www.uniprot.org/citations/19085255" target="\_blank">19085255</a>, PubMed: <a href="http://www.uniprot.org/citations/19720745" target="\_blank">19720745</a>, PubMed: <a href="http://www.uniprot.org/citations/19935711" target="\_blank">19935711</a>, PubMed: <a href="http://www.uniprot.org/citations/19995915" target="\_blank">19995915</a>, PubMed: <a href="http://www.uniprot.org/citations/22017876" target="\_blank">22017876</a>, PubMed: <a href="http://www.uniprot.org/citations/23429703" target="\_blank">23429703</a>, PubMed: <a href="http://www.uniprot.org/citations/28178239" target="\_blank">28178239</a>). Regulates protein synthesis through phosphorylation of EIF4B, RPS6 and EEF2K, and contributes to cell survival by repressing the pro-apoptotic function of BAD (PubMed: <a href="http://www.uniprot.org/citations/11500364" target="\_blank">11500364</a>, PubMed: <a href="http://www.uniprot.org/citations/12801526" target="\_blank">12801526</a>, PubMed: <a href="http://www.uniprot.org/citations/14673156" target="\_blank">14673156</a>, PubMed: <a href="http://www.uniprot.org/citations/15071500" target="\_blank">15071500</a>, PubMed: <a href="http://www.uniprot.org/citations/15341740" target="\_blank">15341740</a>, PubMed: <a href="http://www.uniprot.org/citations/16286006" target="\_blank">16286006</a>, PubMed: <a href="http://www.uniprot.org/citations/17052453" target="\_blank">17052453</a>, PubMed: <a href="http://www.uniprot.org/citations/17053147" target="\_blank">17053147</a>, PubMed: <a href="http://www.uniprot.org/citations/17936702" target="\_blank">17936702</a>, PubMed: <a href="http://www.uniprot.org/citations/18952604" target="\_blank">18952604</a>, PubMed: <a href="http://www.uniprot.org/citations/19085255" target="\_blank">19085255</a>, PubMed: <a href="http://www.uniprot.org/citations/19720745" target="\_blank">19720745</a>, PubMed: <a href="http://www.uniprot.org/citations/19935711" target="\_blank">19935711</a>, PubMed: <a href="http://www.uniprot.org/citations/19995915" target="\_blank">19995915</a>, PubMed: <a href="http://www.uniprot.org/citations/22017876" target="\_blank">22017876</a>, PubMed: <a href="http://www.uniprot.org/citations/23429703" target="\_blank">23429703</a>, PubMed: <a href="http://www.uniprot.org/citations/28178239" target="\_blank">28178239</a>). Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex (PubMed: <a href="http://www.uniprot.org/citations/16286006" target="\_blank">16286006</a>). Upon mitogenic stimulation, phosphorylation by the mechanistic target of rapamycin complex 1 (mTORC1) leads to dissociation from the EIF3 complex and activation (PubMed: <a href="http://www.uniprot.org/citations/16286006" target="\_blank">16286006</a>). 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: <a href="http://www.uniprot.org/citations/16286006" target="\_blank">16286006</a>). Also controls translation initiation by phosphorylating a negative regulator of EIF4A, PDCD4, targeting it for ubiquitination and subsequent proteolysis (PubMed: <a href="http://www.uniprot.org/citations/17053147" target="\_blank">17053147</a>). Promotes initiation of the pioneer round of protein synthesis by phosphorylating POLDIP3/SKAR (PubMed: <a href="http://www.uniprot.org/citations/15341740" target="\_blank">15341740</a>). In response to IGF1, activates translation elongation by phosphorylating EEF2 kinase (EEF2K), which leads to its inhibition and thus activation of EEF2 (PubMed: <a href="http://www.uniprot.org/citations/11500364" target="\_blank">11500364</a>). Also plays a role in feedback regulation of mTORC2 by mTORC1 by phosphorylating RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling (PubMed: <a href="http://www.uniprot.org/citations/19720745" target="\_blank">19720745</a>, PubMed: <a href="http://www.uniprot.org/citations/19935711" target="\_blank">19935711</a>, PubMed: <a href="http://www.uniprot.org/citations/19995915" target="\_blank">19995915</a>). Also involved in feedback regulation of mTORC1 and mTORC2 by phosphorylating DEPTOR (PubMed: <a href="http://www.uniprot.org/citations/22017876" target="\_blank">22017876</a>). 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:<a href="http://www.uniprot.org/citations/17936702" target="\_blank">17936702</a>). 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:<a href="http://www.uniprot.org/citations/17936702" target="\_blank">17936702</a>). Mediates TNF-alpha-induced insulin resistance by phosphorylating IRS1 at multiple serine residues, resulting in accelerated degradation of IRS1 (PubMed:<a href="http://www.uniprot.org/citations/18952604" target="\_blank">18952604</a>). In cells lacking functional TSC1-2 complex, constitutively phosphorylates and inhibits GSK3B (PubMed:<a href="http://www.uniprot.org/citations/17052453" target="\_blank">17052453</a>). May be involved in cytoskeletal rearrangement through binding to neurabin (By similarity). Phosphorylates and activates the pyrimidine biosynthesis enzyme CAD, downstream of MTOR (PubMed:<a href="http://www.uniprot.org/citations/23429703" target="\_blank">23429703</a>). 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:<a href="http://www.uniprot.org/citations/28178239" target="\_blank">28178239</a>).

### Cellular Location

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

### Tissue Location

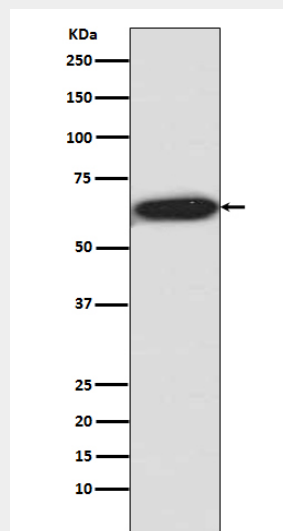
Widely expressed..

## Phospho-S6K1 (T421 + S424) 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](#)

## Phospho-S6K1 (T421 + S424) Antibody - Images



Western blot analysis of SK61 phosphorylation expression in HEK293 cell lysate.