

**S6K1 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP53369****Specification**

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**S6K1 Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">P23443</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Calculated MW	<b>60 KDa</b>
Antigen Region	<b>272-321</b>

**S6K1 Antibody - Additional Information****Gene ID** 6198**Dilution**

WB~~1:1000

**Format**

Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol

**Storage**

Store at -20 °C.Stable for 12 months from date of receipt

**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](http://www.uniprot.org/citations/16286006), PubMed: [17052453](http://www.uniprot.org/citations/17052453), PubMed: [17053147](http://www.uniprot.org/citations/17053147), PubMed: [17936702](http://www.uniprot.org/citations/17936702), PubMed: [18952604](http://www.uniprot.org/citations/18952604), PubMed: [19085255](http://www.uniprot.org/citations/19085255)),

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

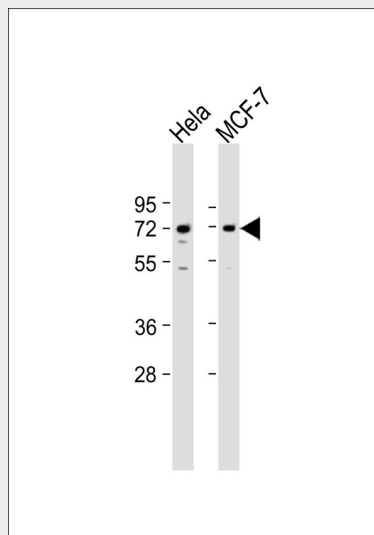
Widely expressed..

### 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



All lanes : Anti-S6K1 Antibody at 1:1000 dilution Lane 1: HeLa whole cell lysate Lane 2: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 59 kDa Blocking/Dilution buffer: 5% NFDN/TBST.

### S6K1 Antibody - Background

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. Regulates protein synthesis through phosphorylation of EIF4B, RPS6 and EEF2K, and contributes to cell survival by repressing the pro-apoptotic function of BAD. Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex. Upon mitogenic stimulation, phosphorylation by the mammalian target of rapamycin complex 1 (mTORC1) leads to dissociation from the EIF3 complex and activation. 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. Also controls translation initiation by phosphorylating a negative regulator of EIF4A, PDCD4, targeting it for ubiquitination and subsequent proteolysis. Promotes initiation of the pioneer round of protein synthesis by phosphorylating POLDIP3/SKAR. In response to IGF1, activates translation elongation by phosphorylating EEF2 kinase (EEF2K), which leads to its inhibition and thus activation of EEF2. Also plays a role in feedback regulation of mTORC2 by mTORC1 by phosphorylating RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling. Mediates cell survival by phosphorylating the pro-apoptotic protein BAD and suppressing its pro-apoptotic function. Phosphorylates mitochondrial URI1 leading to dissociation of a URI1-PPP1CC complex. 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. Mediates TNF-alpha-induced insulin resistance by phosphorylating IRS1 at multiple serine residues, resulting in accelerated degradation of IRS1. In cells lacking functional TSC1- 2 complex, constitutively phosphorylates and inhibits GSK3B. May be involved in cytoskeletal rearrangement through binding to neurabin. Phosphorylates and activates the pyrimidine biosynthesis enzyme CAD, downstream of MTOR.

#### **S6K1 Antibody - References**

- Grove J.,et al.Mol. Cell. Biol. 11:5541-5550(1991).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Zody M.C.,et al.Nature 440:1045-1049(2006).  
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.  
Gout I.,et al.J. Biol. Chem. 273:30061-30064(1998).