

# S6K1 Rabbit mAb

Catalog # AP76805

## Product Information

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<b>Application</b>	WB, IHC-P
<b>Primary Accession</b>	<a href="#">P23443</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	59140

## Additional Information

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<b>Gene ID</b>	6198
<b>Other Names</b>	RPS6KB1
<b>Dilution</b>	WB~~1:1000 IHC-P~~N/A
<b>Format</b>	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	RPS6KB1
<b>Synonyms</b>	STK14A
<b>Function</b>	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: <a href="#">11500364</a> , PubMed: <a href="#">12801526</a> , PubMed: <a href="#">14673156</a> , PubMed: <a href="#">15071500</a> , PubMed: <a href="#">15341740</a> , PubMed: <a href="#">16286006</a> , PubMed: <a href="#">17052453</a> , PubMed: <a href="#">17053147</a> , PubMed: <a href="#">17936702</a> , PubMed: <a href="#">18952604</a> , PubMed: <a href="#">19085255</a> , PubMed: <a href="#">19720745</a> , PubMed: <a href="#">19935711</a> , PubMed: <a href="#">19995915</a> , PubMed: <a href="#">22017876</a> , PubMed: <a href="#">23429703</a> , PubMed: <a href="#">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="#">11500364</a> , PubMed: <a href="#">12801526</a> , PubMed: <a href="#">14673156</a> , PubMed: <a href="#">15071500</a> , PubMed: <a href="#">15341740</a> , PubMed: <a href="#">16286006</a> , PubMed: <a href="#">17052453</a> , PubMed: <a href="#">17053147</a> , PubMed: <a href="#">17936702</a> ,

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 MAPKAP1/SIN1, MTOR and RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling (PubMed:[15899889](#), 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](#)). 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-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..

**Background**

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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.

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