

p70 S6 kinase α Polyclonal Antibody
Catalog # AP63566**Specification****p70 S6 kinase α Polyclonal Antibody - Product Information**

Application	WB
Primary Accession	P23443
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

p70 S6 kinase α Polyclonal Antibody - Additional Information

Gene ID 6198

Other Names

RPS6KB1; STK14A; Ribosomal protein S6 kinase beta-1; S6K-beta-1; S6K1; 70 kDa ribosomal protein S6 kinase 1; P70S6K1; p70-S6K 1; Ribosomal protein S6 kinase I; Serine/threonine-protein kinase 14A; p70 ribosomal S6 kinase alpha; p70 S6 kinase alpha; p70 S6K-alpha; p70 S6KA

Dilution

WB~~WB: 1:1000-2000 IHC: 1:200-500 IF 1:200

Format

PBS, pH 7.4, containing 0.09% (W/V) sodium azide as Preservative and 50% Glycerol.

Storage Conditions

-20°C

p70 S6 kinase α Polyclonal 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, 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 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-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

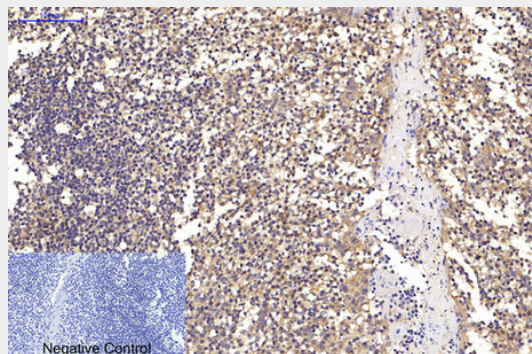
Widely expressed..

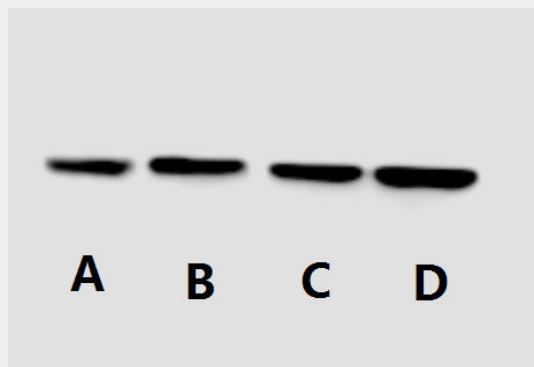
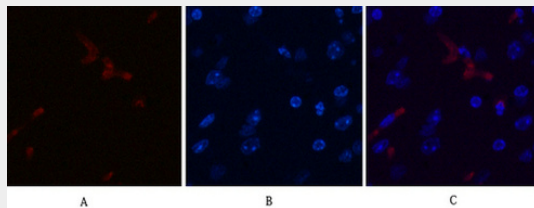
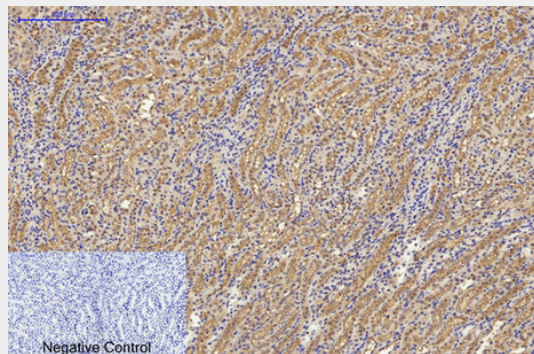
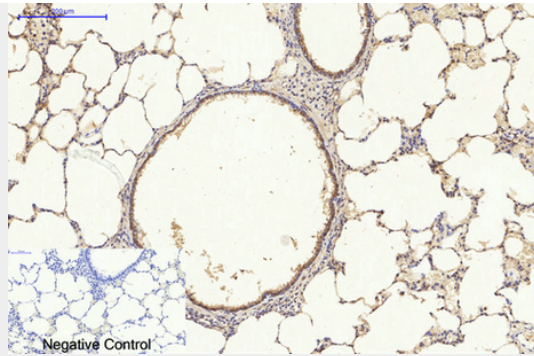
p70 S6 kinase α Polyclonal Antibody - Protocols

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](#)

p70 S6 kinase α Polyclonal Antibody - Images





p70 S6 kinase α Polyclonal Antibody - Background

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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 (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: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).