

Anti-P70 S6 Kinase alpha Rabbit Monoclonal Antibody

Catalog # ABO15308

Product Information

Application	WB, IHC, IF, ICC, FC
Primary Accession	P23443
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-P70 S6 Kinase alpha Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	6198
Other Names	Ribosomal protein S6 kinase beta-1, S6K-beta-1, S6K1, 2.7.11.1, 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, RPS6KB1, STK14A
Calculated MW	59140
Application Details	WB 1:500-1:1000 IHC 1:50-1:200 ICC/IF 1:50-1:200 FC 1:200
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 18R84
Immunogen	A synthesized peptide derived from human P70 S6 Kinase alpha
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	RPS6KB1
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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](#), 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](#)). 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-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](#)).

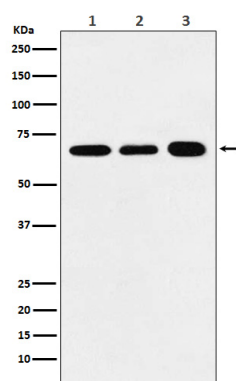
Cellular Location

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

Tissue Location

Widely expressed..

Images



Western blot analysis of P70 S6 Kinase alpha expression in (1) HeLa cell lysate; (2) Raw264.7 cell lysate; (3) PC12 cell lysate.

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