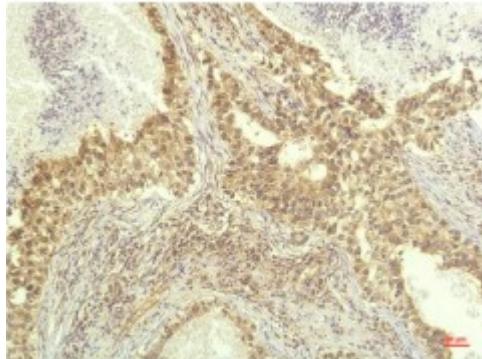


Anti-P70 S6 Kinase antibody



Description	Mouse monoclonal to P70 S6 Kinase.
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Model	STJ97708
Host	Mouse
Reactivity	Human, Mouse, Rat
Applications	IHC
Immunogen	Recombinant peptide derived from P70 S6 Kinase
Gene ID	6198
Gene Symbol	RPS6KB1
Dilution range	IHC 1:100-200
Specificity	P70 S6 Kinase Mouse Monoclonal Antibody (1C7) detects endogenous levels of RPS6KB1
Tissue Specificity	Widely expressed.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Clone ID	1C7
Note	For Research Use Only (RUO).
Protein Name	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
Clonality	Monoclonal

Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:10436 OMIM:608938
Alternative Names	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
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. 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.
Sequence and Domain Family	The autoinhibitory domain is believed to block phosphorylation within the AGC-kinase C-terminal domain and the activation loop.; The TOS (TOR signaling) motif is essential for activation by mTORC1.
Cellular Localization	Cell junction, synapse, synaptosome Mitochondrion outer membrane. Mitochondrion. Colocalizes with URI1 at mitochondrion.. Isoform Alpha I: Nucleus. Cytoplasm.. Isoform Alpha II: Cytoplasm.
Post-translational Modifications	Phosphorylation at Thr-412 is regulated by mTORC1. The phosphorylation at this site is maintained by an agonist-dependent autophosphorylation

mechanism . Activated by phosphorylation at Thr-252 by PDPK1.
Dephosphorylation by PPP1CC at Thr-412 in mitochondrion.

St John's Laboratory Ltd

F +44 (0)207 681 2580
T +44 (0)208 223 3081

W <http://www.stjohnslabs.com/>
E info@stjohnslabs.com