

Rabbit p70 S6 Kinase Polyclonal Antibody | anti-RPS6KB1 antibody

Phospho-p70 S6 Kinase (Ser424) Antibody

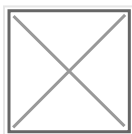
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321570	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

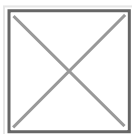
p70 S6 Kinase; Polyclonal Antibody; Phospho-p70 S6 Kinase (Ser424) Antibody; 70 kDa ribosomal protein S6 kinase 1; KS6B1_HUMAN; p70 alpha; P70 beta 1; p70 ribosomal S6 kinase alpha; p70 ribosomal S6 kinase beta 1; p70 S6 kinase alpha; P70 S6 Kinase; p70 S6 kinase; alpha 1; alpha 2; p70 S6K; p70 S6K-alpha; p70 S6KA; p70(S6K) alpha; p70(S6K)-alpha; p70-alpha; p70-S6K 1; p70-S6K; P70S6K; P70S6K1; p70S6Kb; PS6K; Ribosomal protein S6 kinase 70kDa polypeptide 1; Ribosomal protein S6 kinase beta 1; Ribosomal protein S6 kinase beta-1; Ribosomal protein S6 kinase I; RPS6KB1; S6K; S6K-beta-1; S6K1; Serine/threonine kinase 14 alpha; Serine/threonine-protein kinase 14A; STK14A; anti-RPS6KB1 antibody

PRODUCT SPECIFICATIONS

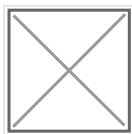
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-p70 S6 Kinase (Ser424) antibody detects endogenous levels of p70 S6 Kinase only when phosphorylated at Serine 424
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	502
Applicable Applications for anti-RPS6KB1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human p70 S6 Kinase around the phosphorylation site of Serine 424
Subcellular Location	Cytoplasm; Nucleus. Cytoplasm and Cell Junction > Synapse > Synaptosome. Mitochondrion Outer Membrane.
Tissue Specificity	Widely expressed.
Conjugation	Unconjugated
Epitope	Phospho Ser424
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



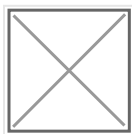
IHC (Immunohistochemistry)
AAA321570 at 1/100 staining human Lymphoma tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of Phospho-p70 S6 Kinase (Ser424) expression in various lysates



WB (Western Blot)
Western blot analysis of p70 S6 Kinase phosphorylation expression in serum treated 293 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.



IF (Immunofluorescence)
AAA321570 staining NIH-3T3 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-RPS6KB1 antibody

Description: 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.

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 (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).

Subunit Structure: Interacts with PPP1R9A/neurabin-1 (By similarity). Interacts with RPTOR (PubMed:12150926). Interacts with IRS1 (PubMed:18952604). Interacts with EIF3B and EIF3C (PubMed:16286006). Interacts with TRAF4 (PubMed:12801526). Interacts with POLDIP3 (PubMed:15341740). Interacts (via N-terminus) with IER5 (PubMed:26496226).

Post-translational Modifications: Phosphorylation at Thr-412 is regulated by mTORC1. The phosphorylation at this site is maintained by an agonist-dependent autophosphorylation mechanism (By similarity). Activated by phosphorylation at Thr-252 by PDPK1. Dephosphorylation by PPP1CC at Thr-412 in mitochondrion.

Similarity: 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. Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. S6 kinase subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	440546395
NCBI GeneID	6198
NCBI Accession #	NP_001258971.1
NCBI GenBank Nucleotide #	NM_001272042.1
UniProt Accession #	P23443; Q7Z721; B2R779; B4DLT4; B4DTG1; E7ESB8; F6UYM1
Molecular Weight	Observed: 70 kDa Predicted: 60 kDa
NCBI Official Full Name	ribosomal protein S6 kinase beta-1 isoform b
NCBI Official Synonym Full Names	ribosomal protein S6 kinase B1
NCBI Official Symbol	RPS6KB1
NCBI Official Synonym Symbols	S6K; PS6K; S6K1; STK14A; p70-S6K; p70 S6KA; p70-alpha; S6K-beta-1; p70(S6K)-alpha
NCBI Protein Information	ribosomal protein S6 kinase beta-1
UniProt Protein Name	Ribosomal protein S6 kinase beta-1
UniProt Gene Name	RPS6KB1
UniProt Synonym Gene Names	STK14A; S6K-beta-1; S6K1; P70S6K1; p70-S6K 1; p70 S6 kinase alpha; p70 S6K-alpha; p70 S6KA

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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