

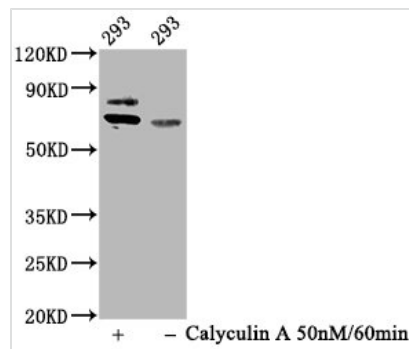


Phospho-RPS6KB1 (T421+S424) Recombinant Monoclonal Antibody

Product Code	CSB-RA020470A421phHU
Abbreviation	Ribosomal protein S6 kinase beta-1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P23443
Immunogen	A synthesized peptide derived from Human Phospho-RPS6KB1 (T421+S424)
Species Reactivity	Human
Tested Applications	ELISA, WB, IF, IP; Recommended dilution: WB:1:500-1:5000, IF:1:20-1:200, IP:1:200-1:1000
Relevance	<p>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-α-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.</p>
Form	Liquid
Conjugate	Non-conjugated



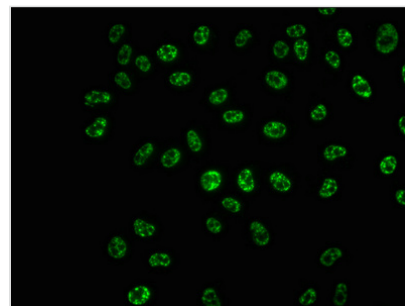
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Ribosomal protein S6 kinase beta-1, 70 kDa ribosomal protein S6 kinase 1, P70S6K1, p70-S6K 1, Ribosomal 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
Immunogen Species	Homo sapiens (Human)
Research Area	Cell Biology
Gene Names	RPS6KB1
Clone No.	3B6

Image

Western Blot

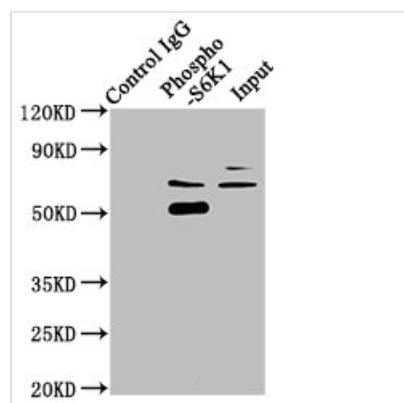
Positive WB detected in 293 whole cell lysate(treated with Calyculin A or not)
All lanes Phospho-RPS6KB1 antibody at 0.93µg/ml

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 70 KDa
Observed band size: 70 KDa



Immunofluorescence staining of HeLa cells with CSB-RA020470A421phHU at 1:100,counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).


Immunoprecipitating Phospho-RPS6KB1 in HeLa whole cell lysate

Lane 1: Rabbit control IgG(1µg)instead of CSB-RA020470A421phHU in HeLa whole cell lysate. For western blotting,a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)

Lane 2: CSB-RA020470A421phHU(3µg)+ HeLa whole cell lysate(1mg)

Lane 3: HeLa whole cell lysate (20µg)



Description

The recombinant RPS6KB1 antibody expression is induced in mammalian cells transfected with a recombinant plasma vector. The recombinant plasma vector was constructed by inserting the gene coding for the antibody against RPS6KB1 into the plasma. The recombinant RPS6KB1 antibody was purified from the cell culture medium using affinity-chromatography. It can react with samples containing RPS6KB1 protein from Human and has been validated for use in the ELISA, WB, IF, IP.

The T421/S424 phospho-RPS6KB1 antibody can detect the RPS6KB1 protein phosphorylated at T421/S424 sites. RPS6KB1, also known as S6K1 or p70S6K, is a serine/threonine kinase of ribosomal protein and is essential for protein translation and elongation. It is involved in the PI3K/mTOR signaling pathway. Growth factors and hormones can activate RPS6KB1 by phosphorylating its numerous serine and threonine sites in a sequential manner. Active RPS6KB1 phosphorylates ribosomal protein S6, leading to selective translation of the 5'-terminal oligopyrimidine tract mRNAs that code for ribosomal proteins and elongation factors.