



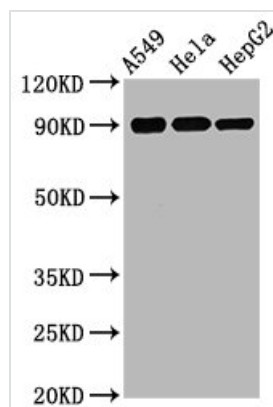
# Phospho-RPS6KA1 (S380) Recombinant Monoclonal Antibody

<b>Product Code</b>	CSB-RA618984A380phHU
<b>Abbreviation</b>	Ribosomal protein S6 kinase alpha-1
<b>Storage</b>	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
<b>Uniprot No.</b>	Q15418
<b>Immunogen</b>	A synthesized peptide derived from Human Phospho-RPS6KA1 (S380)
<b>Species Reactivity</b>	Human
<b>Tested Applications</b>	ELISA, WB, IP; Recommended dilution: WB:1:500-1:5000, IP:1:200-1:1000
<b>Relevance</b>	<p>Serine/threonine-protein kinase that acts downstream of ERK (MAPK1/ERK2 and MAPK3/ERK1) signaling and mediates mitogenic and stress-induced activation of the transcription factors CREB1, ETV1/ER81 and NR4A1/NUR77, regulates translation through RPS6 and EIF4B phosphorylation, and mediates cellular proliferation, survival, and differentiation by modulating mTOR signaling and repressing pro-apoptotic function of BAD and DAPK1. In fibroblast, is required for EGF-stimulated phosphorylation of CREB1, which results in the subsequent transcriptional activation of several immediate-early genes. In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP. Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity. Phosphorylates RPS6 in response to serum or EGF via an mTOR-independent mechanism and promotes translation initiation by facilitating assembly of the pre-initiation complex. In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap-dependent translation. Is involved in the mTOR nutrient-sensing pathway by directly phosphorylating TSC2 at 'Ser-1798', which potentially inhibits TSC2 ability to suppress mTOR signaling, and mediates phosphorylation of RPTOR, which regulates mTORC1 activity and may promote rapamycin-sensitive signaling independently of the PI3K/AKT pathway. Mediates cell survival by phosphorylating the pro-apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function. Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl4). Mediates induction of hepatocyte proliferation by TGFA through phosphorylation of CEBPB (By similarity). Is involved in cell cycle regulation by phosphorylating the CDK inhibitor CDKN1B, which promotes CDKN1B association with 14-3-3 proteins and prevents its translocation to the nucleus and inhibition of G1 progression. Phosphorylates EPHA2 at 'Ser-897', the RPS6KA-EPHA2 signaling pathway controls cell migration (PubMed:26158630).</p>
<b>Form</b>	Liquid
<b>Conjugate</b>	Non-conjugated



<b>Storage Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
<b>Purification Method</b>	Affinity-chromatography
<b>Isotype</b>	Rabbit IgG
<b>Clonality</b>	Monoclonal
<b>Alias</b>	Ribosomal protein S6 kinase alpha-1, S6K-alpha-1, 90 kDa ribosomal protein S6 kinase 1, p90-RSK 1, p90RSK1, p90S6K, MAP kinase-activated protein kinase 1a, MAPK-activated protein kinase 1a, MAPKAP kinase 1a, MAPKAPK-1a, Ribosomal S6 kinase 1, RSK-1, RPS6KA1, MAPKAPK1A, RSK1
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Research Area</b>	Signal Transduction
<b>Gene Names</b>	RPS6KA1
<b>Clone No.</b>	1E11

## Image

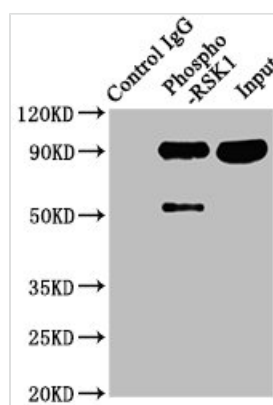


### Western Blot

Positive WB detected in A549 whole cell lysate, HeLa whole cell lysate, HepG2 whole cell lysate  
All lanes Phospho-RPS6KA1 antibody at 1.75µg/ml

### Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution  
Predicted band size: 90 KDa  
Observed band size: 90 KDa



### Immunoprecipitating Phospho-RPS6KA1 in HeLa whole cell lysate

Lane 1: Rabbit control IgG(1µg)instead of CSB-RA618984A380phHU 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-RA618984A380phHU(3µg)+ HeLa whole cell lysate(1mg)  
Lane 3: HeLa whole cell lysate (20µg)

## Description

To manufacture the phospho-RPS6KA1 (S380) recombinant monoclonal antibody, the journey begins with the retrieval of genes responsible for encoding this antibody from rabbits that have previously undergone immunization with a synthesized peptide originating from the human RPS6KA1 protein phosphorylated at S380. Subsequently, these antibody genes are seamlessly integrated into specialized expression vectors. Following this genetic modification, the vectors are thoughtfully introduced into host suspension cells,



which are diligently cultivated to encourage the production and secretion of antibodies. After this growth phase, the phospho-RPS6KA1 (S380) recombinant monoclonal antibody undergoes a meticulous purification process using affinity chromatography techniques, effectively isolating the antibody from the surrounding cell culture supernatant. Lastly, the functionality of the antibody is rigorously assessed through a battery of tests, including ELISA, WB, and IP, conclusively affirming its ability to effectively react with the human RPS6KA1 protein phosphorylated at S380.

Phosphorylation of RPS6KA1 at S380 is a crucial regulatory mechanism that allows cells to respond to extracellular signals and stressors, modulating gene expression and influencing various cellular processes, including cell growth and stress responses. Dysregulation of this phosphorylation event can have significant implications in diseases and conditions related to cell proliferation and gene expression.