



Phospho-RPS6KA5 (S376) Recombinant Monoclonal Antibody

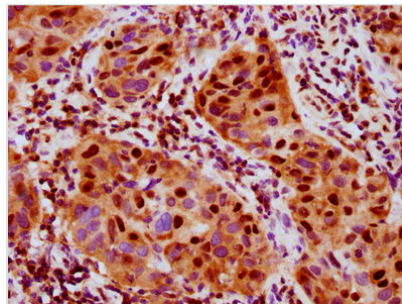
Product Code	CSB-RA020468A376phHU
Abbreviation	Ribosomal protein S6 kinase alpha-5
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O75582
Immunogen	A synthesized peptide derived from Human Phospho-RPS6KA5 (S376)
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	<p>Serine/threonine-protein kinase that is required for the mitogen or stress-induced phosphorylation of the transcription factors CREB1 and ATF1 and for the regulation of the transcription factors RELA, STAT3 and ETV1/ER81, and that contributes to gene activation by histone phosphorylation and functions in the regulation of inflammatory genes (PubMed:11909979, PubMed:12569367, PubMed:12763138, PubMed:9687510, PubMed:18511904, PubMed:9873047). Phosphorylates CREB1 and ATF1 in response to mitogenic or stress stimuli such as UV-C irradiation, epidermal growth factor (EGF) and anisomycin (PubMed:11909979, PubMed:9873047). Plays an essential role in the control of RELA transcriptional activity in response to TNF and upon glucocorticoid, associates in the cytoplasm with the glucocorticoid receptor NR3C1 and contributes to RELA inhibition and repression of inflammatory gene expression (PubMed:12628924, PubMed:18511904). In skeletal myoblasts is required for phosphorylation of RELA at 'Ser-276' during oxidative stress (PubMed:12628924). In erythropoietin-stimulated cells, is necessary for the 'Ser-727' phosphorylation of STAT3 and regulation of its transcriptional potential (PubMed:12763138). Phosphorylates ETV1/ER81 at 'Ser-191' and 'Ser-216', and thereby regulates its ability to stimulate transcription, which may be important during development and breast tumor formation (PubMed:12569367). Directly represses transcription via phosphorylation of 'Ser-1' of histone H2A (PubMed:15010469). Phosphorylates 'Ser-10' of histone H3 in response to mitogenics, stress stimuli and EGF, which results in the transcriptional activation of several immediate early genes, including proto-oncogenes c-fos/FOS and c-jun/JUN (PubMed:12773393). May also phosphorylate 'Ser-28' of histone H3 (PubMed:12773393). Mediates the mitogen- and stress-induced phosphorylation of high mobility group protein 1 (HMGN1/HMG14) (PubMed:12773393). In lipopolysaccharide-stimulated primary macrophages, acts downstream of the Toll-like receptor TLR4 to limit the production of pro-inflammatory cytokines (By similarity). Functions probably by inducing transcription of the MAP kinase phosphatase DUSP1 and the anti-inflammatory cytokine interleukin 10 (IL10), via CREB1 and ATF1 transcription factors (By similarity). Plays a role in neuronal cell death by mediating the downstream effects of excitotoxic injury (By similarity). Phosphorylates TRIM7 at 'Ser-107' in response to growth factor signaling via the MEK/ERK pathway, thereby</p>



stimulating its ubiquitin ligase activity (PubMed:25851810).

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 alpha-5, S6K-alpha-5, 90 kDa ribosomal protein S6 kinase 5, Nuclear mitogen- and stress-activated protein kinase 1, RSK-like protein kinase, RSKL, RPS6KA5, MSK1
Immunogen Species	Homo sapiens (Human)
Research Area	Signal Transduction
Gene Names	RPS6KA5
Clone No.	2F3

Image



IHC image of CSB-RA020468A376pH1U diluted at 1:100 and staining in paraffin-embedded human bladder cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.

Description

To create the phospho-RPS6KA5 (S376) recombinant monoclonal antibody, the process initiates with the isolation of genes responsible for coding this antibody from rabbits that have been previously exposed to a synthesized peptide originating from the human RPS6KA5 protein phosphorylated at S376. These antibody genes are then meticulously 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 cultivation phase, the phospho-RPS6KA5 (S376) recombinant monoclonal antibody undergoes a thorough purification process using affinity chromatography techniques, effectively separating the antibody from the surrounding cell culture supernatant. Finally, the functionality of the antibody is rigorously assessed through ELISA and IHC, conclusively confirming its capability to interact effectively with the human RPS6KA5 protein phosphorylated at S376.

Phosphorylation of RPS6KA5 at S376 is a crucial regulatory mechanism that allows cells to respond to extracellular signals and stressors, modulating gene



expression and influencing various cellular processes. Dysregulation of this phosphorylation event can have significant implications in diseases and conditions related to cell growth, stress responses, and gene expression.