

**RSKB (MSK2) Antibody (C-term R321) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP7011a****Specification**

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**RSKB (MSK2) Antibody (C-term R321) Blocking peptide - Product Information**

Primary Accession [O75676](#)  
Other Accession [O75585](#)

**RSKB (MSK2) Antibody (C-term R321) Blocking peptide - Additional Information**

**Gene ID** 8986

**Other Names**

Ribosomal protein S6 kinase alpha-4, S6K-alpha-4, 90 kDa ribosomal protein S6 kinase 4, Nuclear mitogen- and stress-activated protein kinase 2, Ribosomal protein kinase B, RSKB, RPS6KA4, MSK2

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP7011a](/product/products/AP7011a) was selected from the C-term region of human MSK2 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**RSKB (MSK2) Antibody (C-term R321) Blocking peptide - Protein Information**

**Name** RPS6KA4

**Synonyms** MSK2

**Function**

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 factor RELA, and that contributes to gene activation by histone phosphorylation and functions in the regulation of inflammatory genes. Phosphorylates CREB1 and ATF1 in response to mitogenic or stress stimuli such as UV-C irradiation, epidermal growth factor (EGF) and anisomycin. Plays an essential role in the control of RELA transcriptional activity in response to TNF. 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. May also

phosphorylate 'Ser- 28' of histone H3. Mediates the mitogen- and stress-induced phosphorylation of high mobility group protein 1 (HMGN1/HMG14). In lipopolysaccharide-stimulated primary macrophages, acts downstream of the Toll-like receptor TLR4 to limit the production of pro-inflammatory cytokines. 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.

**Cellular Location**

Nucleus

**RSKB (MSK2) Antibody (C-term R321) Blocking peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**RSKB (MSK2) Antibody (C-term R321) Blocking peptide - Images****RSKB (MSK2) Antibody (C-term R321) Blocking peptide - Background**

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the  $\gamma$  phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The AGC kinase group consists of 63 kinases including the cyclic nucleotide-regulated protein kinase (PKA & PKG) family, the diacylglycerol-activated/phospholipid-dependent protein kinase C (PKC) family, the related to PKA and PKC (RAC/Akt) protein kinase family, the kinases that phosphorylate G protein-coupled receptors family (ARK), and the kinases that phosphorylate ribosomal protein S6 family (RSK). The calcium/calmodulin-dependent kinase (CAMK) group consists of 75 kinases regulated by  $\text{Ca}^{2+}$ /CaM and close relative family (CAMK, CAMKL, DAPK, MAPKAPK).

**RSKB (MSK2) Antibody (C-term R321) Blocking peptide - References**

Zhu, S., et al., Hum. Genet. 103(6):674-680 (1998). Pierrat, B., et al., J. Biol. Chem. 273(45):29661-29671 (1998). Deak, M., et al., EMBO J. 17(15):4426-4441 (1998).