

**Phospho-MAPKAPK1-S364 Antibody Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP3145a****Specification**

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**Phospho-MAPKAPK1-S364 Antibody Blocking Peptide - Product Information**Primary Accession [Q15418](#)**Phospho-MAPKAPK1-S364 Antibody Blocking Peptide - Additional Information****Gene ID** 6195**Other Names**

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

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP3145a](/product/products/AP3145a) was selected from the 367-378 region of human Phospho-MAPKAPK1-S364. 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.

**Phospho-MAPKAPK1-S364 Antibody Blocking Peptide - Protein Information****Name** RPS6KA1**Synonyms** MAPKAPK1A, RSK1**Function**

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 (PubMed:[10679322](http://www.uniprot.org/citations/10679322), PubMed:[16223362](http://www.uniprot.org/citations/16223362), PubMed:[15117958](http://www.uniprot.org/citations/15117958), PubMed:

<http://www.uniprot.org/citations/12213813> target="\_blank">12213813</a>, PubMed:<a href="http://www.uniprot.org/citations/9430688" target="\_blank">9430688</a>, PubMed:<a href="http://www.uniprot.org/citations/17360704" target="\_blank">17360704</a>, PubMed:<a href="http://www.uniprot.org/citations/26158630" target="\_blank">26158630</a>, PubMed:<a href="http://www.uniprot.org/citations/18722121" target="\_blank">18722121</a>, PubMed:<a href="http://www.uniprot.org/citations/35772404" target="\_blank">35772404</a>). In fibroblast, is required for EGF-stimulated phosphorylation of CREB1, which results in the subsequent transcriptional activation of several immediate-early genes (PubMed:<a href="http://www.uniprot.org/citations/18508509" target="\_blank">18508509</a>, PubMed:<a href="http://www.uniprot.org/citations/18813292" target="\_blank">18813292</a>). In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP (PubMed:<a href="http://www.uniprot.org/citations/12213813" target="\_blank">12213813</a>, PubMed:<a href="http://www.uniprot.org/citations/16223362" target="\_blank">16223362</a>). Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity (PubMed:<a href="http://www.uniprot.org/citations/18508509" target="\_blank">18508509</a>, PubMed:<a href="http://www.uniprot.org/citations/18813292" target="\_blank">18813292</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/17360704" target="\_blank">17360704</a>). In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap- dependent translation (PubMed:<a href="http://www.uniprot.org/citations/16763566" target="\_blank">16763566</a>). Is involved in the mTOR nutrient-sensing pathway by directly phosphorylating TSC2 at 'Ser- 1798', which potently 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 (PubMed:<a href="http://www.uniprot.org/citations/15342917" target="\_blank">15342917</a>). Also involved in feedback regulation of mTORC1 and mTORC2 by phosphorylating DEPTOR (PubMed:<a href="http://www.uniprot.org/citations/22017876" target="\_blank">22017876</a>). Mediates cell survival by phosphorylating the pro- apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function (PubMed:<a href="http://www.uniprot.org/citations/10679322" target="\_blank">10679322</a>, PubMed:<a href="http://www.uniprot.org/citations/16213824" target="\_blank">16213824</a>). Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl4) (PubMed:<a href="http://www.uniprot.org/citations/11684016" target="\_blank">11684016</a>). Mediates induction of hepatocyte proliferation by TGFA through phosphorylation of CEBPB (PubMed:<a href="http://www.uniprot.org/citations/18508509" target="\_blank">18508509</a>, PubMed:<a href="http://www.uniprot.org/citations/18813292" target="\_blank">18813292</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/18508509" target="\_blank">18508509</a>, PubMed:<a href="http://www.uniprot.org/citations/18813292" target="\_blank">18813292</a>). Phosphorylates EPHA2 at 'Ser-897', the RPS6KA-EPHA2 signaling pathway controls cell migration (PubMed:<a href="http://www.uniprot.org/citations/26158630" target="\_blank">26158630</a>). In response to mTORC1 activation, phosphorylates EIF4B at 'Ser-406' and 'Ser-422' which stimulates bicarbonate cotransporter SLC4A7 mRNA translation, increasing SLC4A7 protein abundance and function (PubMed:<a href="http://www.uniprot.org/citations/35772404" target="\_blank">35772404</a>).

#### **Cellular Location**

Nucleus. Cytoplasm.

#### **Phospho-MAPKAPK1-S364 Antibody Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

#### **Phospho-MAPKAPK1-S364 Antibody Blocking Peptide - Images**

#### **Phospho-MAPKAPK1-S364 Antibody Blocking Peptide - Background**

This gene encodes a member of the RSK (ribosomal S6 kinase) family of serine/threonine kinases. This kinase contains 2 nonidentical kinase catalytic domains and phosphorylates various substrates, including members of the mitogen-activated kinase (MAPK) signalling pathway. The activity of this protein has been implicated in controlling cell growth and differentiation. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. Transcript Variant: This variant (1) represents the longer transcript but encodes the shorter isoform (a).

#### **Phospho-MAPKAPK1-S364 Antibody Blocking Peptide - References**

Yntema, H.G., et al., Genomics 62(3):332-343 (1999).