

**RSK2 / RPS6KA3 Antibody**  
Rabbit mAb  
Catalog # AP92828**Specification****RSK2 / RPS6KA3 Antibody - Product Information**

Application	WB, IHC, FC
Primary Accession	<a href="#">P51812</a>
Reactivity	Rat
Clonality	Monoclonal

**Other Names**

CLS; HU2; HU3; Insulin stimulated protein kinase 1; ISPK1; MAP kinase activated protein kinase 1b; MAPKAP kinase 1b; MAPKAPK 1b; MAPKAPK1B; MRX19; p90 RSK2; p90 RSK3; p90RSK3; pp90RSK2; Ribosomal protein S6 kinase alpha 3; Ribosomal protein s6 kinase ii alpha 2; Ribosomal S6 kinase 2; Rps6ka3; RSK; RSK2; S6 kinase 2; S6K alpha3;

Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	83736 Da

**RSK2 / RPS6KA3 Antibody - Additional Information**

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human RSK2 / RPS6KA3
Description	Serine/threonine kinase that may play a role in mediating the growth-factor and stress induced activation of the transcription factor CREB.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**RSK2 / RPS6KA3 Antibody - Protein Information**

**Name** RPS6KA3

**Synonyms** ISPK1, MAPKAPK1B, RSK2

**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:<a href="http://www.uniprot.org/citations/16213824" target="\_blank">16213824</a>, PubMed:<a href="http://www.uniprot.org/citations/16223362" target="\_blank">16223362</a>, PubMed:<a href="http://www.uniprot.org/citations/16223362" target="\_blank">16223362</a>, PubMed:<a href="http://www.uniprot.org/citations/16223362" target="\_blank">16223362</a>)

<http://www.uniprot.org/citations/17360704> target="\_blank">17360704</a>, PubMed:<a href="http://www.uniprot.org/citations/9770464" target="\_blank">9770464</a>). In fibroblast, is required for EGF- stimulated phosphorylation of CREB1 and histone H3 at 'Ser-10', which results in the subsequent transcriptional activation of several immediate-early genes (PubMed:<a href="http://www.uniprot.org/citations/10436156" target="\_blank">10436156</a>, PubMed:<a href="http://www.uniprot.org/citations/9770464" target="\_blank">9770464</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/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/8250835" target="\_blank">8250835</a>). Phosphorylates RPS6 in response to serum or EGF via an mTOR-independent mechanism and promotes translation initiation by facilitating assembly of the preinitiation 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/18508509" target="\_blank">18508509</a>, PubMed:<a href="http://www.uniprot.org/citations/18813292" target="\_blank">18813292</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/18722121" target="\_blank">18722121</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/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/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 (By similarity). In LPS-stimulated dendritic cells, is involved in TLR4- induced macropinocytosis, and in myeloma cells, acts as effector of FGFR3-mediated transformation signaling, after direct phosphorylation at Tyr-529 by FGFR3 (By similarity). Negatively regulates EGF-induced MAPK1/3 phosphorylation via phosphorylation of SOS1 (By similarity). Phosphorylates SOS1 at 'Ser-1134' and 'Ser-1161' that create YWHAB and YWHAЕ binding sites and which contribute to the negative regulation of MAPK1/3 phosphorylation (By similarity). 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>). Acts as a regulator of osteoblast differentiation by mediating phosphorylation of ATF4, thereby promoting ATF4 transactivation activity (By similarity).

#### Cellular Location

Nucleus. Cytoplasm

#### Tissue Location

Expressed in many tissues, highest levels in skeletal muscle

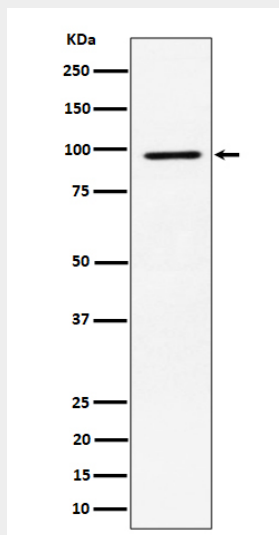
#### RSK2 / RPS6KA3 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### RSK2 / RPS6KA3 Antibody - Images



Western blot analysis of RSK2 / RPS6KA3 expression in MCF7 cell lysate.