

**Phospho-RPS6KA1(T359) Antibody**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP3497a**

**Specification**

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**Phospho-RPS6KA1(T359) Antibody - Product Information**

Application	WB, DB,E
Primary Accession	<a href="#">Q15418</a>
Other Accession	<a href="#">P10666</a> , <a href="#">P10665</a> , <a href="#">P18652</a>
Reactivity	Human
Predicted	Chicken, Xenopus
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	82723

**Phospho-RPS6KA1(T359) Antibody - 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**

This RPS6KA1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T359 of human RPS6KA1.

**Dilution**

WB~~1:2000  
DB~~1:500

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho-RPS6KA1(T359) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Phospho-RPS6KA1(T359) Antibody - 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](#), PubMed:[12213813](#), PubMed:[15117958](#), PubMed:[16223362](#), PubMed:[17360704](#), PubMed:[18722121](#), PubMed:[26158630](#), PubMed:[35772404](#), PubMed:[9430688](#)). In fibroblast, is required for EGF-stimulated phosphorylation of CREB1, which results in the subsequent transcriptional activation of several immediate-early genes (PubMed:[18508509](#), PubMed:[18813292](#)). In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP (PubMed:[12213813](#), PubMed:[16223362](#)). Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity (PubMed:[18508509](#), PubMed:[18813292](#)). 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:[17360704](#)). In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap- dependent translation (PubMed:[16763566](#)). 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:[15342917](#)). Also involved in feedback regulation of mTORC1 and mTORC2 by phosphorylating DEPTOR (PubMed:[22017876](#)). Mediates cell survival by phosphorylating the pro-apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function (PubMed:[10679322](#), PubMed:[16213824](#)). Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl4) (PubMed:[11684016](#)). Mediates induction of hepatocyte proliferation by TGFA through phosphorylation of CEBPB (PubMed:[18508509](#), PubMed:[18813292](#)). 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:[18508509](#), PubMed:[18813292](#)). Phosphorylates EPHA2 at 'Ser-897', the RPS6KA-EPHA2 signaling pathway controls cell migration (PubMed:[26158630](#)). 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:[35772404](#)).

## Cellular Location

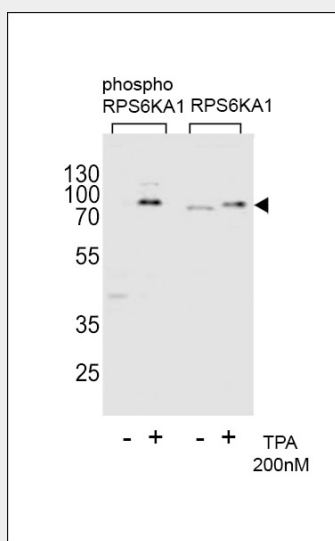
Nucleus. Cytoplasm.

## Phospho-RPS6KA1(T359) Antibody - Protocols

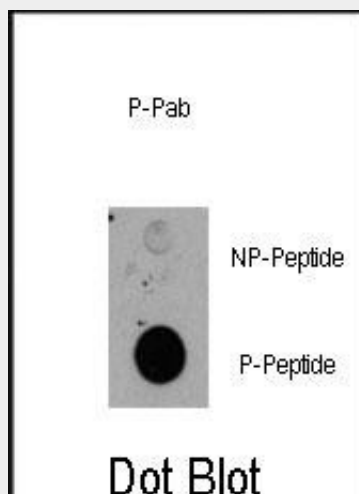
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Phospho-RPS6KA1(T359) Antibody - Images



Western blot analysis of extracts from HeLa cells, untreated or treated with TPA, 200nM using phospho RPS6KA1-T359 (left) or RPS6KA1 antibody (right)



Dot blot analysis of anti-RPS6KA1-pT359 Pab (RB13385) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

### Phospho-RPS6KA1(T359) Antibody - Background

RPS6KA1 is 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.

### Phospho-RPS6KA1(T359) Antibody - References

- Roux, P.P., et al., Proc. Natl. Acad. Sci. U.S.A. 101(37):13489-13494 (2004).
- Bohuslav, J., et al., J. Biol. Chem. 279(25):26115-26125 (2004).
- Hu, Y., et al., J. Biol. Chem. 279(28):29325-29335 (2004).
- Fernando, R.I., et al., Mol. Biol. Cell 15(7):3266-3284 (2004).
- Cavet, M.E., et al., J. Biol. Chem. 278(20):18376-18383 (2003).