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

Specification

Phospho-RPS6KA1(T359) Antibody - Product Information

Application	**WB, DB,E**
Primary Accession	Q15418
Other Accession	P10666, P10665, P18652
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:16223362, PubMed:15117958, PubMed:12213813, PubMed:9430688, PubMed:17360704, PubMed:26158630, PubMed:18722121, PubMed:35772404). 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 prolifration 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 Cytomety
- Cell Culture

Phospho-RPS6KA1(T359) Antibody - Images

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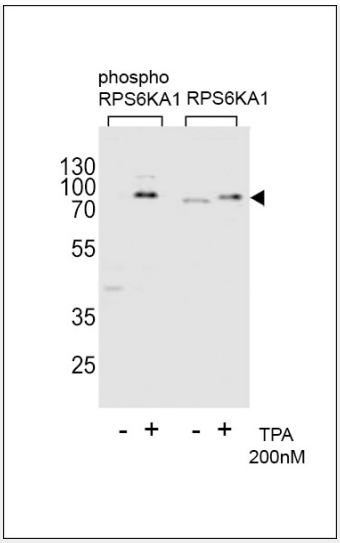
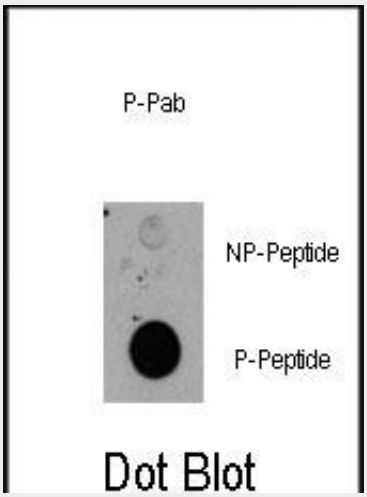


Western blot analysis of extracts from Hela cells,untreated or treated with TPA,200nM□using phospho RPS6KA1-T359 (left) or RPS6KA1 antibody(right)



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).