

Rabbit Anti-RPS6KA1 antibody

SL3547R

Product Name RPS6KA1

Chinese Name 丝氨酸/苏氨酸激酶 p90RSK 蛋白抗体

Alias KS6A1_HUMAN; Ribosomal protein S6 kinase alpha-1; EC:2.7.11.1; MAPKAPK1A; RSK1; 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); ribosomal protein S6 kinase A1; RSK; HU-1; p90Rsk; MAPKAPK1; RSK1 p90;

Research Area immunology Chromatin and nuclear signals Signal transduction transcriptional regulatory factor Kinases and Phosphatases Epigenetics

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human(predicted:Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit)
ICC/IF=1:100-500 (Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 81kDa

Detection molecular weight 90 kDa

Cellular localization The nucleus cytoplasmic

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human RPS6KA1: 621-732/732

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.



Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed Rsk1 is a member of a family of 90kDa ribosomal protein S6 kinases, which includes Rsk1, Rsk2 and Rsk3. These are broadly expressed serine/threonine protein kinases activated in response to mitogenic stimuli, including extracellular signal regulated protein kinases Erk1 and Erk2. Rsk1 is activated by MAPK in vitro and in vivo via phosphorylation. Active Rsks appear to play a major role in transcriptional regulation by translocating to the nucleus and phosphorylating c Fos and CREB.
Product Detail	<p>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. In fibroblast, is required for EGF-stimulated phosphorylation of CREB1, which results in the subsequent transcriptional activation of several immediate-early genes. In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP. Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity. Phosphorylates RPS6 in response to serum or EGF via an mTOR-independent mechanism and promotes translation initiation by facilitating assembly of the preinitiation complex. In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap-dependent translation. 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. Mediates cell survival by phosphorylating the pro-apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function. Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl4). 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.</p> <p>Subunit: Forms a complex with either MAPK1/ERK2 or MAPK3/ERK1 in quiescent cells. Transiently dissociates following mitogenic stimulation. Interacts with ETV1/ER81 and FGFR1.</p>

Subcellular Location:

Nucleus. Cytoplasm.

Post-translational modifications:

Activated by phosphorylation at Ser-221 by PDPK1. Autophosphorylated on Ser-380, as part of the activation process. May be phosphorylated at Thr-359 and Ser-363 by MAPK1/ERK2 and MAPK3/ERK1.

N-terminal myristoylation results in an activated kinase in the absence of added growth factors.

Similarity:

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. S6 kinase subfamily.

Contains 1 AGC-kinase C-terminal domain.

Contains 2 protein kinase domains.

SWISS:

Q15418

Gene ID:

6195

Database links:

[Entrez Gene: 6195](#) Human

[Entrez Gene: 20111](#) Mouse

[Entrez Gene: 81771](#) Rat

[Omim: 601684](#) Human

[SwissProt: Q15418](#) Human

[SwissProt: P18653](#) Mouse

[SwissProt: Q63531](#) Rat

[Unigene: 149957](#) Human

[Unigene: 301827](#) Mouse

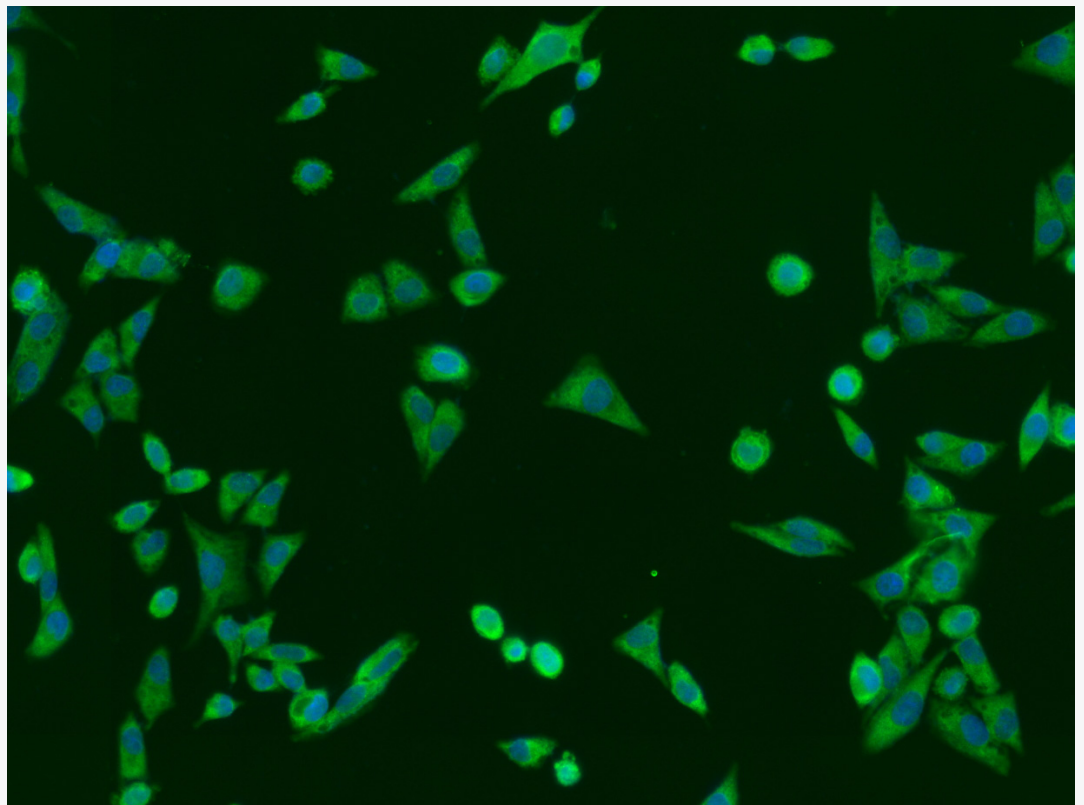
[Unigene: 34915](#) Rat

p90RSK 蛋白属于广泛表达的丝氨酸/苏氨酸激酶。RSK 家族包括 RSK1、RSK2、RSK3 和 RSK4，它们的典型特征是含有两个不同的功能性激酶结构域和羧基端 ERKs(extracellular signal-regulated kinases)结合结构域。RSK 激酶结构域内外的几个位点包括 Ser380、Thr359、Ser363 和 Thr573 的磷酸化都对 RSK 的激酶活性激活非常重要。

RSK1-3 可被 MAPKs 所磷酸化激活，也可以通过自身磷酸化激活，还可被一些生长因子或神经递质等诱导激活的 PI3K 信号通路所激活。RSK 在被 MAPK 磷酸化激活时，是由 Ras、Raf-1、MAP kinase kinase(MEK)和 MAP kinase 信号通路所介导。PI3K 诱导的 RSK1 激活是由丝氨酸/苏氨酸激酶 mTOR 介导的。

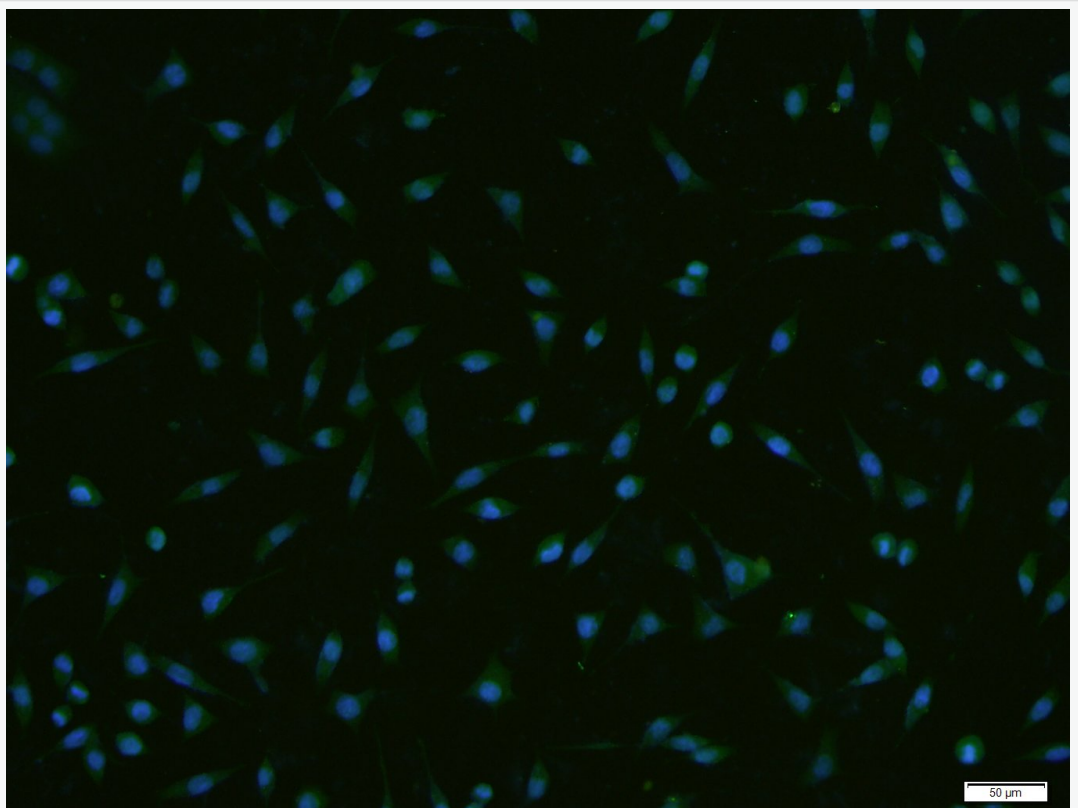
RSK1 在葡萄糖稳态调控和细胞大小的调控中起重要作用。RSK 可以磷酸化并调节转录因子 c-fos 和糖原合成酶激酶 3(GSK3, glycogen synthase kinase 3)的活性。有报道 RSK1 可以和 MAPK1、I κ B α 、TOB 和 TSC2 等相互作用。RSK 可以在有丝分裂信号刺激下会转位到 The nucleus 内。

Product Picture



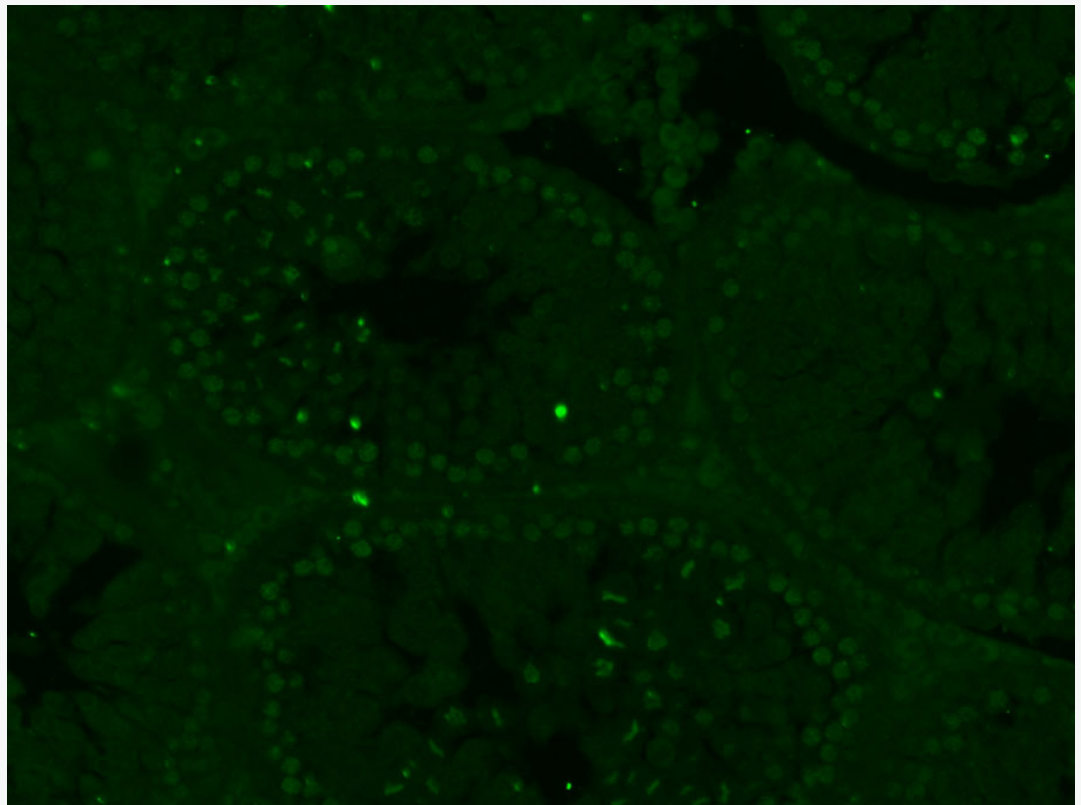
Tissue/cell: HeLa cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for

20 min; Antibody incubation with (RPS6KA1) Polyclonal Antibody, Unconjugated (SL3547R) 1:200, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody (SL0295G-FITC) at 37°C for 90 minutes, DAPI (5ug/ml, blue, C-0033) was used to stain the cell nuclei.



Tissue/cell: A431 cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (RPS6KA1) Polyclonal Antibody, Unconjugated (SL3547R) 1:200, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody (SL0295G-FITC) at 37°C for 90 minutes, DAPI

(5ug/ml, blue, C-0033) was used to stain the cell nuclei.



Paraformaldehyde-fixed, paraffin embedded (Rat testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (RPS6KA1) Polyclonal Antibody, Unconjugated (SL3547R) at 1:400 overnight at 4°C, followed by a conjugated secondary antibody (SL0295G-FITC) for 90 minutes, and DAPI for nuclei staining.