

Anti-p90 RSK1 pS732 (RABBIT) Antibody
p90 RSK1 phospho S732 Antibody
Catalog # ASR5479**Specification****Anti-p90 RSK1 pS732 (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, E, I, LCI
Application Note	This affinity-purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. By western blot a band approximately 90 kDa in size corresponding to p90 RSK1 pS732 protein is expected in the appropriate cell lysate or extract.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the C-terminal end of human RSK1 protein.
Preservative	0.01% (w/v) Sodium Azide

Anti-p90 RSK1 pS732 (RABBIT) Antibody - Additional Information**Gene ID** 6195**Other Names**
6195**Purity**

This product was affinity purified from monospecific antiserum by immunoaffinity chromatography using phosphorylated peptide coupled to agarose beads followed by solid phase adsorption against non phosphorylated peptide. This antibody is specific for human p90 RSK1 protein phosphorylated at S732. A BLAST analysis was used to suggest cross reactivity with p90 RSK1 from human, rat, mouse, horse, bovine, and dog based on 100% homology with the immunizing sequence. Partially cross reactivity may occur against opossum and chicken based on >90% homology with the immunizing sequence. Cross reactivity with p90 RSK1 pS732 from other sources has not been determined.

Storage Condition

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended

storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-p90 RSK1 pS732 (RABBIT) 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 potentially 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).

target="_blank">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

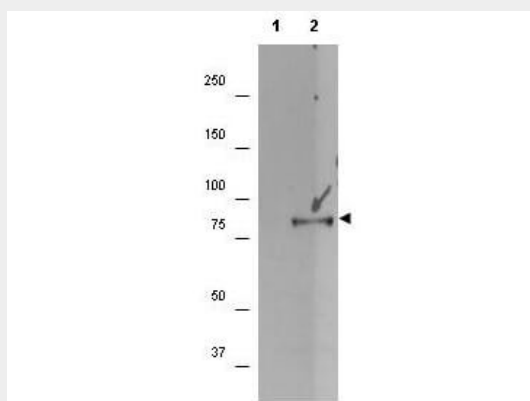
Nucleus. Cytoplasm.

Anti-p90 RSK1 pS732 (RABBIT) 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](#)

Anti-p90 RSK1 pS732 (RABBIT) Antibody - Images



Western blot using Rockland's affinity purified anti-p90 RSK1 pS732 antibody shows detection of a band ~90 kDa in size corresponding to phosphorylated p90 RSK1 (arrowhead) in EGF stimulated (lane 2) HEK293T cell lysates prepared from cells grown in the absence of serum for 12 h. No staining is observed in similarly prepared lysates derived from unstimulated (control) cells (lane 1). After transfer, the membrane was blocked overnight followed by reaction with the primary

antibody at a 1:1,000 dilution. Detection occurred using a peroxidase conjugated secondary antibody and ECL. Personal Communication. Kuldeep Patel, Loyola University Medical Center, Maywood, IL.

Anti-p90 RSK1 pS732 (RABBIT) Antibody - Background

Ribosomal S6 Kinase 1 (RSK1, S6K-alpha 1, 90 kDa Ribosomal Protein S6 Kinase 1, MAP kinase-activated protein kinase 1a, or MAPKAPK1A) is an immediate downstream effector of mitogen activated protein kinases and therefore promotes cell proliferation and survival. It has serine/threonine kinase activity and may play a role in mediating the growth-factor and stress-induced activation of the transcription factor CREB. The C-terminal region of RSK1 is reported to be an ERK docking site, where serine 732 phosphorylation status is critical for RSK1 activation. When serine 732 is not phosphorylated, ERK1/2 binds to the ERK docking site of RSK1, and upon stimulation, activates RSK1. The activated RSK1 then autophosphorylates serine 732, leading to the dissociation of ERK from RSK1 and termination of activation by ERK. RSK1 is studied in cancer research and is known to inactive tumor suppressor complexes and death kinases.