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Anti-p90 RSK1 (RABBIT) Antibody

p90 RSK1 Antibody
Catalog # ASR5362

Specification

Anti-p90 RSK1 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Mouse**
Clonality	**Polyclonal**
Application	**WB, E, IP, I, LCI**
Application Note	**This affinity purified antibody has been tested for use in ELISA, western blot, and immunoprecipitation. Specific conditions for reactivity should be optimized by the end user. Expect a predominant band approximately 88 kDa in size corresponding to RSK1 by western blotting in the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.1 M Tris Chloride, 0.5 M Sodium Chloride, pH 8.0**
Immunogen	**This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a C-terminal region of human RSK1 protein.**
Stabilizer	**50% (v/v) Glycerol**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-p90 RSK1 (RABBIT) Antibody - Additional Information

Gene ID 6195

Other Names
6195

Purity
This affinity-purified antibody is directed against the human RSK1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross reactivity with RSK1 proteins from human, rat and mouse. Partial reactivity may occur against RSK2 and RSK3 but has not been tested. Reactivity against homologues from other sources is not known.

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 (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 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:<a

href="http://www.uniprot.org/citations/18508509" target="_blank">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).

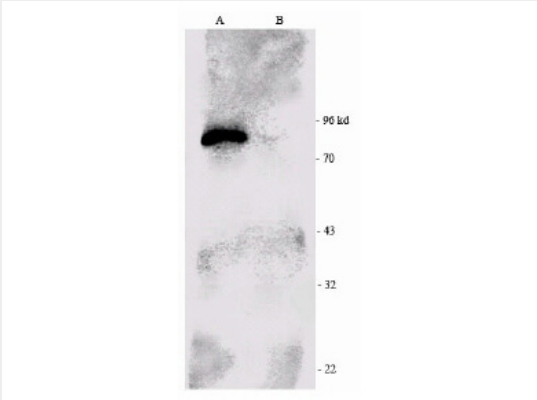
Cellular Location
Nucleus. Cytoplasm.

Anti-p90 RSK1 (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 Cytomety
- Cell Culture

Anti-p90 RSK1 (RABBIT) Antibody - Images



Western-blot analysis of p90 RSK1 immunoprecipitated from the mouse brain extract (B) and using RSK1-HRP as a probe. Immunoprecipitated negative control (A).

Anti-p90 RSK1 (RABBIT) Antibody - Background

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 Rsk's appear to play a major role in transcriptional regulation by translocating to the nucleus and phosphorylating c-Fos and CREB.

RSK1 is studied in cancer research and is known to inactive tumor suppressor complexes and death kinases.