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RSK1 Antibody

Store at -20C
#9333

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	90	Rabbit	#Q15418	6195

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

RSK1 Antibody detects endogenous levels of RSK1. It does not cross-react with the RSK2 or RSK3 isoforms.

Species predicted to react based on 100% sequence homology

Dog

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu718 of human RSK1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The 90 kDa ribosomal S6 kinases (RSK1-4) are a family of widely expressed Ser/Thr kinases characterized by two nonidentical, functional kinase domains (1) and a carboxy-terminal docking site for extracellular signal-regulated kinases (ERKs) (2). Several sites both within and outside of the RSK kinase domain, including Ser380, Thr359, Ser363, and Thr573, are important for kinase activation (3). RSK1-3 are activated via coordinated phosphorylation by MAPKs, autophosphorylation, and phosphoinositide-3-OH kinase (PI3K) in response to many growth factors, polypeptide hormones, and neurotransmitters (3).

PI3K-induced activation of RSK1 is mediated by the Ser/Thr kinase mTOR (mammalian target of rapamycin) (4,5). This activation of RSK1 selectively increases the translation of mRNA transcripts containing a tract of pyrimidine (TOP) motif. An association between RSK1 and specific PKA subunits depends upon RSK1 activation state and determines both intracellular localization and specific activity of the kinase (6). Evidence from animal models suggests that RSK1 is a key regulator of glucose homeostasis and cell size (7).

Background References

1. Fisher, T.L. and Blenis, J. (1996) *Mol Cell Biol* 16, 1212-9.
2. Smith, J.A. et al. (1999) *J Biol Chem* 274, 2893-8.
3. Dalby, K.N. et al. (1998) *J Biol Chem* 273, 1496-505.
4. Hay, N. and Sonenberg, N. (2004) *Genes Dev* 18, 1926-45.
5. Um, S.H. et al. (2006) *Cell Metab* 3, 393-402.
6. Chaturvedi, D. et al. (2006) *Mol Cell Biol* 26, 4586-600.
7. Ruvinsky, I. et al. (2005) *Genes Dev* 19, 2199-211.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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