



# **RSK1 (Ribosomal S6 Kinase 1, RSK-1, 90kD Ribosomal Protein S6 Kinase 1, p90-RSK 1, p90RSK1, p90S6K, MAP Kinase-activated Protein Kinase 1a, MAPK-activated Protein Kinase 1a, MAPKAP Kinase 1a, MAPKAPK1A, MAPKAPK-1a, Ribosomal Protein S6 Kinase alpha-1, RPS6KA1, S6K-alpha-1)**

## **Catalog number**

R9399-01J

## **Supplier**

United States Biological

The 90kD ribosomal S6 kinases (RSK1-4) are a family of widely expressed serine/threonine kinases characterized by two nonidentical, functional kinase domains (1) and a C-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, by autophosphorylation, and by 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).

## **Applications**

Suitable for use in Western Blot. Other applications not tested.

## **Recommended Dilution**

Western Blot: 1:1000, incubate membrane with diluted antibody in TBS, 5% BSA, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Optimal dilutions to be determined by the researcher.

## **Storage and Stability**

May be stored at 4°C for short-term only. For long-term storage, aliquot and store at -20°C. Aliquots are stable for 12 months at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

## **Immunogen**

Synthetic peptide corresponding to residues surrounding Glu718 of human RSK1. Species sequence homology: canine (100%)

## **Formulation**

Supplied as a liquid in 10mM sodium HEPES, pH 7.5, 150mM sodium chloride, 0.1mg/ml BSA, 50% glycerol.



### **Purity**

Purified by Protein A and peptide affinity chromatography.

### **Specificity**

Recognizes endogenous levels of RSK1. Does not cross-react with the RSK2 or RSK3 isoforms.  
Species crossreactivity: mouse, rat and monkey.

### **Product Type**

Pab

### **Source**

human

### **Isotype**

IgG

### **Grade**

Affinity Purified

### **Applications**

WB

### **Crossreactivity**

Hu Mk Mo Rt

### **Storage**

-20°C

### **MW**

90

### **Reference**

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.