

RSK1 monoclonal antibody

Catalog: MB67109

Host: Mouse

Reactivity: Human, Mouse

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 and a carboxy-terminal docking site for extracellular signal-regulated kinases (ERKs). Several sites both within and outside of the RSK kinase domain, including Ser380, Thr359, Ser363, and Thr573, are important for kinase activation. 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.

Upon mitogenic stimulation, p44/42 Erk1/2 and Erk5 MAP kinases cooperatively phosphorylate p90RSK at Thr573 (p90RSK1 numbering) located within the C-terminal kinase domain and at Thr359/Ser363 in the linker region between the two kinase domains. Phosphorylation at Thr573 within the activation loop of the p90RSK C-terminal kinase domain promotes activation and directs phosphorylation at Ser380 within the hydrophobic stretch of the linker region. When phosphorylated, Ser380 acts as a docking site for the constitutively active Ser/Thr kinase PDK1, which in turn phosphorylates p90RSK at Ser221 within the N-terminal kinase domain activation loop, resulting in full enzymatic activation of p90RSK. Antibodies against these phosphorylation sites are useful for understanding the kinetics and regulation of p90RSK activation.

For more information regarding the phospho-regulatory sites within each RSK isoform, including more information regarding the seminal studies demonstrating the complex phosphorylation cascades involved, please see the references herein and PhosphoSitePlus® (www.phosphosite.org).

Product:

Mouse IgG1 kappa. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 70 kDa

Swiss-Prot:

Q15418

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/500 - 1/1000)

Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of RSK1 protein.

DATA:



Western blot analysis of RSK1 expression in K562 (A) whole cell lysates.

Note:

For research use only, not for use in diagnostic procedure.

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