Store at -20°C

#3556

Phospho-RSK2 (Ser227) (D53A11) Rabbit mAb

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For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #6197
Swiss-Prot Acc. #P51812

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R, Mk	90 kDa	Rabbit IgG**

Background: The 90 kDa 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).

PDK1 phosphorylates Ser227 in the activation loop of the amino-terminal kinase domain of RSK2, leading to substantial activation of the kinase *in vitro* and *in vivo*. The constitutively active PDK1 cooperates with ERK in the activation of RSK following the exposure of cells to growth factors or UV-light (4, 5).

Specificity/Sensitivity: Phospho-RSK2 (Ser227) (D53A11) Rabbit mAb detects endogenous levels of RSK2 only when phosphorylated at Ser227. It shows cross-reactivity with RSK1 when phosphorylated at the homologous serine residues.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser227 of human RSK2.

Background References:

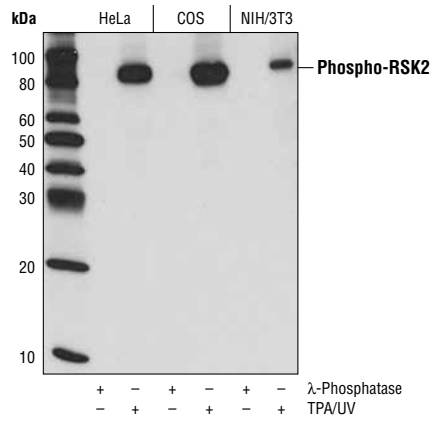
(1) Fisher, T.L. and Blenis, J. (1996) *Mol Cell Biol* 16, 1212–9.

(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) Jensen, C.J. et al. (1999) *J Biol Chem* 274, 27168–76.

(5) Mérienne, K. et al. (2000) *Oncogene* 19, 4221–9.



Western blot analysis of extracts from HeLa, COS and NIH/3T3 cells, treated with λ-phosphatase or TPA/UV, using Phospho-RSK2 (Ser227) (D53A11) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.