Revision 1

Store at -20C

#3556

Phospho-RSK2 (Ser227) (D53A11) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	90	Rabbit IgG	#P51812, #Q15418	6197, 6195

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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.

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

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).

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).

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.

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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