Revision 1

Phospho-SGK1 (Thr256) Antibody

#2939 Store at -20C

Cell Signaling TECHNOLOGY®

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

Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
Endogenous	50	Rabbit	#O00141	6446

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

Phospho-SGK1 (Thr256) Antibody detects endogenous levels of SGK1 only when phosphorylated at Thr256. The antibody also detects recombinant human SGK2 when phosphorylated at Thr253.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr256 of mouse SGK1.

Background

Serum and glucocorticoid-inducible kinase (SGK) is a serine/threonine kinase closely related to Akt (1). SGK is rapidly induced in response to a variety of stimuli, including serum, glucocorticoid, follicle stimulating hormone, osmotic shock, and mineralocorticoids. SGK activation can be accomplished via HGF PI3K-dependent pathways and by integrin-mediated PI3K-independent pathways (2,3). Induction and activation of SGK has been implicated in activating the modulation of anti-apoptotic and cell cycle regulation (4-6). SGK also plays an important role in activating certain potassium, sodium, and chloride channels, suggesting its involvement in the regulation of processes such as cell survival, neuronal excitability, and renal sodium excretion (2). SGK is negatively regulated by ubiquitination and proteasome degradation (7).
SGK is phosphorylated *in vitro* and *in vivo* by PDK1 on Thr256 in its activation loop. This phosphorylation leads to the activation of SGK1 mediated by PI3 kinase signaling (3).

Background References

1. Webster, M.K. et al. (1993) *Mol Cell Biol* 13, 2031-40.
2. Kobayashi, T. and Cohen, P. (1999) *Biochem J* 339 (Pt 2), 319-28.
3. Park, J. et al. (1999) *EMBO J* 18, 3024-33.
4. Brunet, A. et al. (2001) *Mol Cell Biol* 21, 952-65.
5. Mikosz, C.A. et al. (2001) *J Biol Chem* 276, 16649-54.
6. Hayashi, M. et al. (2001) *J Biol Chem* 276, 8631-4.
7. Brickley, D.R. et al. (2002) *J Biol Chem* 277, 43064-70.

Species Reactivity

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

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