Revision 1

Store at -20C

#5642

Phospho-SGK3 (Thr320) (D30E6) Rabbit mAb

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Transfected Only	62	Rabbit IgG	#Q96BR1	23678

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-SGK3 (Thr320) (D30E6) Rabbit mAb detects overexpressed levels of SGK3 protein only when phosphorylated at Thr320.

Species predicted to react based on 100% sequence homology

Mouse, Rat, Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr320 of human SGK3 protein.

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).
SGK3 has been shown to be a downstream signaling molecule in the PI3K pathway. Its activation and phosphorylation at Thr320 by PDK1 may be an Akt-independent manner of signaling in cancer (8).

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.
8. Vasudevan, K.M. et al. (2009) *Cancer Cell* 16, 21-32.

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

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Limited Uses

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