SANTA CRUZ BIOTECHNOLOGY, INC.

# p-SGK (Ser 422): sc-16745

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Serum- and glucocorticoid-regulated kinase (SGK), a serine/threonine protein kinase, is transcriptionally regulated by serum, glucorticoids and mineralocorticoids. SGK regulates the control of extracellular fluid volume, blood pressure and sodium homeostasis, and is also a component of the p38 MAPK-mediated response to hyperosmotic stress. SGK is a downstream target of phosphoinositide 3-kinase (PI 3-kinase)-stimulated growth factor signaling, and 3-phosphoinositide-dependent protein kinase 1 (PDK1) is capable of phosphorylating the activation-loop of SGK at Thr 256. Thr 256 and Ser 422 are the putative phosphorylation sites of SGK. Mutations at those putative phosphorylation sites inhibit SGK activation. For example, the Ser 422 to Ala mutant, lacking a PDK-2 phosphorylation site, is inactive and resistant to activation by Insulin. Thus, in addition to regulation at the level of gene expression, the enzymatic activity of SGK is regulated by multiple protein kinases, including PKA, PDK1 and PDK2.

## CHROMOSOMAL LOCATION

Genetic locus: SGK (human) mapping to 6q23.2; Sgk (mouse) mapping to 10 A3.

## SOURCE

p-SGK (Ser 422) is available as either goat (sc-16745) or rabbit (sc-16745-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 422 phosphorylated SGK of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16745 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-SGK (Ser 422) is recommended for detection of Ser 422 phosphorylated SGK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). p-SGK (Ser 422) is also recommended for detection of correspondingly phosphorylated SGK in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SGK siRNA (h): sc-38913, SGK siRNA (m): sc-38914, SGK shRNA Plasmid (h): sc-38913-SH, SGK shRNA Plasmid (m): sc-38914-SH, SGK shRNA (h) Lentiviral Particles: sc-38913-V and SGK shRNA (m) Lentiviral Particles: sc-38914-V.

Molecular Weight (predicted) of p-SGK isoforms: 49/60/51/48/52 kDa.

Molecular Weight (observed) of p-SGK isoforms: 42/69-76 kDa.

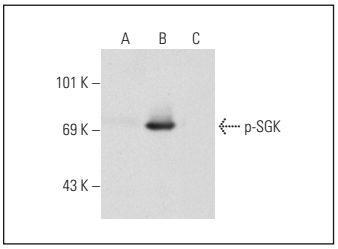
## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

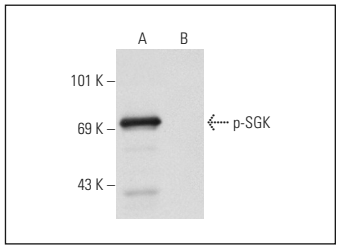
## RESEARCH USE

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

## DATA




p-SGK (Ser 422)-R: sc-16745-R. Western blot analysis of SGK phosphorylation in untreated (**A**), insulin treated (**B**) and insulin and lambda protein phosphatase treated (**C**) HeLa whole cell lysates.




p-SGK (Ser 422)-R: sc-16745-R. Western blot analysis of SGK phosphorylation in untreated (**A**) and lambda protein phosphatase treated (**B**) NIH/3T3 whole cell lysates.

## SELECT PRODUCT CITATIONS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4. Spangle, J.M., et al. 2010. The human papillomavirus type 16 E6 oncoprotein activates mTORC1 signaling and increases protein synthesis. J. Virol. 84: 9398-9407.
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