

# SGK (C-20): sc-15885

## BACKGROUND

Serum- and glucocorticoid-regulated kinase (SGK), also known as SGK1, is a serine/threonine protein kinase and a member of the "AGC" subfamily, which includes protein kinases A, G, and C. SGK plays an important role in activating certain potassium, sodium, and chloride channels, suggesting an involvement in the regulation of processes such as cell survival, neuronal excitability, and renal sodium excretion. SGK contains a catalytic domain, which is most similar to Akt1 (also known as protein kinase B or PKB). SGK is a down-stream target of PI 3-kinase-stimulated growth factor signaling, with 3-phosphoinositide-dependent protein kinase 1 (PDK1) capable of phosphorylating the activation-loop of SGK at Threonine-256. The adrenal corticosteroid hormone, aldosterone, induces the transcription of SGK, which mediates Na<sup>+</sup> transport by stimulating epithelial sodium channel activity. The SGK promoter contains a glucocorticoid response element and an SP-1 regulatory element, and is a transcriptional target for p53. SGK is also a component of the p38 MAPK-mediated response to hyperosmotic stress. The human SGK gene maps to chromosome 6q23.2 and encodes the 431-amino acid SGK protein.

## CHROMOSOMAL LOCATION

Genetic locus: SGK1 (human) mapping to 6q23.2; Sgk1 (mouse) mapping to 10 A3.

## SOURCE

SGK (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of 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-15885 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SGK (C-20) is recommended for detection of SGK of human and, to a lesser extent, mouse and rat 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).

SGK (C-20) is also recommended for detection of SGK in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SGK siRNA (h): sc-38913, SGK siRNA (m): sc-38914, SGK siRNA (r): sc-156058, SGK shRNA Plasmid (h): sc-38913-SH, SGK shRNA Plasmid (m): sc-38914-SH, SGK shRNA Plasmid (r): sc-156058-SH, SGK shRNA (h) Lentiviral Particles: sc-38913-V, SGK shRNA (m) Lentiviral Particles: sc-38914-V and SGK shRNA (r) Lentiviral Particles: sc-156058-V.

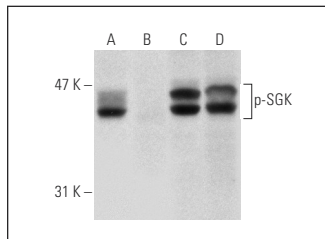
Molecular Weight (predicted) of SGK isoforms: 48/50/52/60 kDa.

Molecular Weight (observed) of SGK isoforms: 42/49/60 kDa.

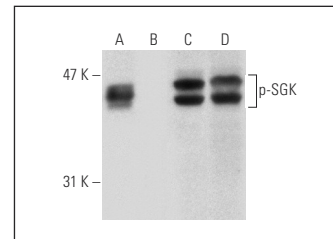
## STORAGE

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

## DATA



Western blot analysis of SGK phosphorylation in untreated (A,C) and lambda protein phosphatase (sc-200312A) treated (B,D) Hep G2 whole cell lysates. Antibodies tested include p-SGK (Thr 256)-R: sc-16744-R (A,B) and SGK (C-20): sc-15885 (C,D).



Western blot analysis of SGK phosphorylation in untreated (A,C) and lambda protein phosphatase (sc-200312A) treated (B,D) Hep G2 whole cell lysates. Antibodies tested include p-SGK (Ser 422)-R: sc-16745-R (A,B) and SGK (C-20): sc-15885 (C,D).

## SELECT PRODUCT CITATIONS

- Nuber, U.A., et al. 2005. Upregulation of glucocorticoid-regulated genes in a mouse model of Rett syndrome. *Hum. Mol. Genet.* 14: 2247-2256.
- Naishiro, Y., et al. 2005. Morphological and transcriptional responses of untransformed intestinal epithelial cells to an oncogenic  $\beta$ -catenin protein. *Oncogene* 24: 3141-3153.
- Poulin, H., et al. 2006. Serum- and glucocorticoid-regulated kinase 1 (SGK1) induction by the EWS/NOR-1(NR4A3) fusion protein. *Biochem. Biophys. Res. Commun.* 346: 306-313.
- Sun, A., et al. 2010. Adeno-associated virus-delivered short hairpin-structured RNA for androgen receptor gene silencing induces tumor eradication of prostate cancer xenografts in nude mice: a preclinical study. *Int. J. Cancer* 126: 764-774.
- Keller-Wood, M., et al. 2011. A role for mineralocorticoid receptors in the physiology of the ovine fetus: effects on ACTH and lung liquid composition. *Pediatr. Res.* 69: 491-496.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **SGK (G-4): sc-377360** or **SGK (H-4): sc-28338**, our highly recommended monoclonal alternatives to SGK (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **SGK (G-4): sc-377360**.