

SGK2 (G-13): sc-47391

BACKGROUND

The serum- and glucocorticoid-regulated kinases (SGKs) include SGK1, SGK2 and SGK3 and are members of the serine/threonine protein kinase family. SGKs play 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. The SGKs display structural and sequence similarity to the PKB/Akt family except for the absence of a Pleckstrin homology (PH) domain. The SGKs are also downstream targets of PI 3-kinase-stimulated growth factor signaling. They can all phosphorylate NEDD4-1, which subsequently activates various channels and transporters including ENaC, KV1.3 or EAAT1. Aldosterone induces the expression of SGK1, but not SGK2 or SGK3. SGK3 is ubiquitously expressed, but SGK2 only shows significant levels of expression in liver, kidney and pancreas.

REFERENCES

1. Park, J., Leong, M.L., Buse, P., Maiyar, A.C., Firestone, G.L. and Hemmings, B.A. 1999. Serum- and glucocorticoid-inducible kinase (SGK) is a target of the PI 3-kinase-stimulated signaling pathway. *EMBO J.* 18: 3024-3033.
2. Kobayashi, T., Deak, M., Morrice, N. and Cohen, P. 2000. Characterization of the structure and regulation of two novel isoforms of serum- and glucocorticoid-induced protein kinase. *J. Biochem.* 344: 189-197.
3. Lang, F. and Cohen, P. 2001. Regulation and physiological roles of serum- and glucocorticoid-induced protein kinase isoforms. *Sci. STKE* 2001: RE17.
4. Gamper, N., Fillon, S., Feng, Y., Friedrich, B., Lang, P.A., Henke, G., Huber, S.M., Kobayashi, T., Cohen, P. and Lang, F. 2002. K⁺ channel activation by all three isoforms of serum- and glucocorticoid-dependent protein kinase SGK. *Pflugers Arch.* 445: 60-66.
5. Friedrich, B., Feng, Y., Cohen, P., Risler, T., Vandewalle, A., Bröer, S., Wang, J., Pearce, D. and Lang, F. 2003. The serine/threonine kinases SGK2 and SGK3 are potent stimulators of the Na⁺ channel α , β , γ -ENaC. *Pflugers Arch.* 445: 693-696.
6. Tessier, M. and Woodgett, J.R. 2006. Role of the PX domain and phosphorylation in activation of serum and glucocorticoid-regulated kinase-3. *J. Biol. Chem.* 281: 23978-23989.

CHROMOSOMAL LOCATION

Genetic locus: SGK2 (human) mapping to 20q13.12; Sgk2 (mouse) mapping to 2 H2.

SOURCE

SGK2 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SGK2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-47391 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SGK2 (G-13) is recommended for detection of SGK2 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SGK2 (G-13) is also recommended for detection of SGK2 isoforms 1 and 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SGK2 siRNA (h): sc-61536, SGK2 siRNA (m): sc-61537, SGK2 shRNA Plasmid (h): sc-61536-SH, SGK2 shRNA Plasmid (m): sc-61537-SH, SGK2 shRNA (h) Lentiviral Particles: sc-61536-V and SGK2 shRNA (m) Lentiviral Particles: sc-61537-V.

Molecular Weight of SGK2: 41.4 kDa.

Positive Controls: PC-12 cell lysate: sc-2250 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


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Try **SGK2 (30-2): sc-100355**, our highly recommended monoclonal alternative to SGK2 (G-13).