

SGK3 (X-22): sc-130874

BACKGROUND

Serine/threonine-protein kinase Sgk3 (SGK3), also designated serum/glucocorticoid regulated kinase 3, belongs to the Ser/Thr protein kinase family of proteins. The serum- and glucocorticoid-regulated kinase proteins are closely related to the Akt protein family. SGK1, a homolog of SGK3, activates ion channels, in particular potassium (K⁺) channels. SGK2 and SGK3 have been found to also be involved in this activation process, making all three of these proteins important regulators for cell proliferation, epithelial transport and neuromuscular excitability. SGK3 acts as a mediator of IL-3 dependent survival signals in the cell. It localizes to the early endosome and in vesicle-like structures. SGK3 is a widely expressed protein, but it is primarily detected in kidney, liver, pancreas, brain and heart. Phosphorylation of SGK3 at residue Ser 486 leads to an increase in SGK3 activation.

REFERENCES

- Dai, F., et al. 1999. Cloning and mapping of a novel human serum/ glucocorticoid regulated kinase-like gene, SGKL, to chromosome 8q12.3-q13.1. *Genomics* 62: 95-97.
- Kobayashi, T., et al. 1999. Characterization of the structure and regulation of two novel isoforms of serum- and glucocorticoid-induced protein kinase. *Biochem. J.* 344: 189-197.
- Gamper, N., et al. 2002. K⁺ channel activation by all three isoforms of serum- and glucocorticoid-dependent protein kinase SGK. *Pflugers Arch.* 445: 60-66.
- Lang, F., et al. 2003. Regulation of channels by the serum and glucocorticoid-inducible kinase-implications for transport, excitability and cell proliferation. *Cell. Physiol. Biochem.* 13: 41-50.
- McCormick, J.A., et al. 2004. Targeted disruption of the protein kinase SGK3/CISK impairs postnatal hair follicle development. *Mol. Biol. Cell* 15: 4278-4288.
- Henke, G., et al. 2004. Regulation of the voltage gated K⁺ channel Kv1.3 by the ubiquitin ligase NEDD4-2 and the serum and glucocorticoid inducible kinase SGK1. *J. Cell. Physiol.* 199: 194-199.

CHROMOSOMAL LOCATION

Genetic locus: SGK3 (human) mapping to 8q13.1.

SOURCE

SGK3 (X-22) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of SGK3 of human origin.

PRODUCT

Each vial contains 100 µg of IgG in PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

SGK3 (X-22) is recommended for detection of SGK3 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SGK3 siRNA (h): sc-44852, SGK3 shRNA Plasmid (h): sc-44852-SH and SGK3 shRNA (h) Lentiviral Particles: sc-44852-V.

Molecular Weight of full length SGK3: 65 kDa.

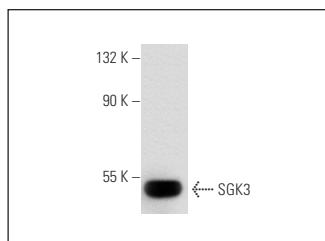
Molecular Weight of SGK3 partial product: 53 kDa.

Positive Controls: A-375 cell lysate: sc-3811 or HeLa whole cell lysate: sc-2200.

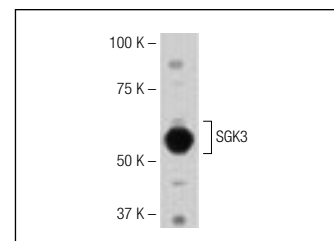
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SGK3 (X-22): sc-130874. Western blot analysis of SGK3 expression in HeLa whole cell lysate.



SGK3 (X-22): sc-130874. Western blot analysis of SGK3 expression in A-375 whole cell lysate.

RESEARCH USE

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

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Try **SGK3 (C-6): sc-166847**, our highly recommended monoclonal alternative to SGK3 (X-22).