

# SGK2 (h): 293T Lysate: sc-116881

## 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., et al. 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., 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.
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., et al. 2002. K<sup>+</sup> channel activation by all three isoforms of serum- and glucocorticoid-dependent protein kinase SGK. *Pflugers Arch.* 445: 60-66.
5. Friedrich, B., et al. 2003. The serine/threonine kinases SGK2 and SGK3 are potent stimulators of the Na<sup>+</sup> channel  $\alpha$ ,  $\beta$ ,  $\gamma$ -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.

## PRODUCT

SGK2 (h): 293T Lysate represents a lysate of human SGK2 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

SGK2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SGK2 antibodies. Recommended use: 10-20  $\mu$ l per lane.

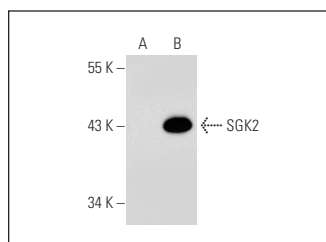
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SGK2 (3Q-2): sc-100355 is recommended as a positive control antibody for Western Blot analysis of enhanced human SGK2 expression in SGK2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



SGK2 (3Q-2): sc-100355. Western blot analysis of SGK2 expression in non-transfected: sc-117752 (A) and human SGK2 transfected: sc-116881 (B) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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](http://www.scbt.com) for detailed protocols and support products.