SANTA CRUZ BIOTECHNOLOGY, INC.

SGK3 (m): 293T Lysate: sc-123522

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

1. 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.
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. 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.
4. 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.
5. 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.
6. 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.
7. Palmada, M., et al. 2005. The serine/threonine kinases SGK1, 3 and PKB stimulate the amino acid transporter ASCT2. Biochem. Biophys. Res. Commun. 331: 272-277.

CHROMOSOMAL LOCATION

Genetic locus: Sgk3 (mouse) mapping to 1 A2.

PRODUCT

SGK3 (m): 293T Lysate represents a lysate of mouse SGK3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

SGK3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive SGK3 antibodies. Recommended use: 10-20 µl per lane.

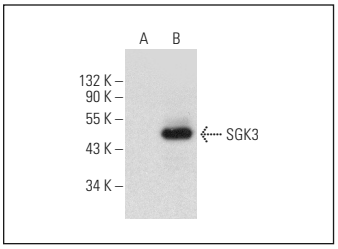
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SGK3 (C-6): sc-166847 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse SGK3 expression in SGK3 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-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



SGK3 (C-6): sc-166847. Western blot analysis of SGK3 expression in non-transfected: sc-117752 (**A**) and mouse SGK3 transfected: sc-123522 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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