



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# SIK1 (h3): 293T Lysate: sc-158961

## BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. SIK1 (salt-inducible kinase 1), also known as SNF1LK or MSK, is a 783 amino acid protein that contains one UBA domain and one protein kinase domain and belongs to the Ser/Thr protein kinase family. Localized to both the nucleus and the cytoplasm, SIK1 uses magnesium as a cofactor to catalyze the ATP-dependent phosphorylation of target proteins and is thought to be important for the early stages of skeletal muscle growth and myocardial cell differentiation. Additionally, SIK1 has a potential role in regulation of the G<sub>2</sub>/M cell cycle transition, as well as in inhibitory control of CREB protein function.

## REFERENCES

1. Ruiz, J.C., et al. 1994. Identification of novel protein kinases expressed in the myocardium of the developing mouse heart. *Mech. Dev.* 48: 153-164.
2. Nishimura, Y., et al. 1999. Molecular cloning and characterization of mammalian homologues of vesicle-associated membrane protein-associated (VAMP-associated) proteins. *Biochem. Biophys. Res. Commun.* 254: 21-26.
3. Lizcano, J.M., et al. 2004. LKB1 is a master kinase that activates 13 kinases of the AMPK subfamily, including MARK/PAR-1. *EMBO J.* 23: 833-843.
4. Stephenson, A., et al. 2004. SNF1LK encodes a protein kinase that may function in cell cycle regulation. *Genomics* 83: 1105-1115.
5. Al-Hakim, A.K., et al. 2005. 14-3-3 cooperates with LKB1 to regulate the activity and localization of QSK and SIK. *J. Cell Sci.* 118: 5661-5673.
6. Takemori, H., et al. 2007. TORC-SIK cascade regulates CREB activity through the basic leucine zipper domain. *FEBS J.* 274: 3202-3209.
7. Sjöström, M., et al. 2007. SIK1 is part of a cell sodium-sensing network that regulates active sodium transport through a calcium-dependent process. *Proc. Natl. Acad. Sci. USA* 104: 16922-16927.
8. Kowanetz, M., et al. 2008. TGF $\beta$  induces SIK to negatively regulate type I receptor kinase signaling. *J. Cell Biol.* 182: 655-662.

## CHROMOSOMAL LOCATION

Genetic locus: SNF1LK (human) mapping to 21q22.3.

## PRODUCT

SIK1 (h3): 293T Lysate represents a lysate of human SIK1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l 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.

## RESEARCH USE

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

## APPLICATIONS

SIK1 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive SIK1 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.

## PROTOCOLS

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