



**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](http://linkedin.com/company/szaboscandic)



# RNF123 (h): 293T Lysate: sc-116360

## BACKGROUND

The RING-type zinc-finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in protein-protein interactions and protein-DNA interactions. RNF123 (RING-finger protein 123), also known as KPC1 (Kip1 (p27) ubiquitination-promoting complex protein 1) or FP1477, contains one RING-type zinc-finger domain and one SPRY domain. Localizing to the cytoplasm, RNF123 functions as the catalytic component of the KPC complex that acts as an E3 ubiquitin-protein ligase. Specifically, RNF123 is essential for the ubiquitination and subsequent degradation of p27 during the cell cycle G<sub>1</sub> phase. Via its N-terminus, RNF123 is known to interact with GBDR1 (another component of the KPC) and p27 (a cyclin-dependent kinase inhibitor). Due to alternative splicing events, two isoforms exist for RNF123.

## REFERENCES

1. Kamura, T., Hara, T., Matsumoto, M., Ishida, N., Okumura, F., Hatakeyama, S., Yoshida, M., Nakayama, K. and Nakayama, K.I. 2004. Cytoplasmic ubiquitin ligase KPC regulates proteolysis of p27(Kip1) at G<sub>1</sub> phase. *Nat. Cell Biol.* 6: 1229-1235.
2. Kotobashi, S., Kamura, T., Hara, T., Ishida, N. and Nakayama, K.I. 2005. Molecular dissection of the interaction between p27 and Kip1 ubiquitylation-promoting complex, the ubiquitin ligase that regulates proteolysis of p27 in G<sub>1</sub> phase. *J. Biol. Chem.* 280: 17694-17700.
3. Hara, T., Kamura, T., Kotobashi, S., Takahashi, H., Fujiwara, K., Onoyama, I., Shirakawa, M., Mizushima, N. and Nakayama, K.I. 2005. Role of the UBL-UBA protein KPC2 in degradation of p27 at G<sub>1</sub> phase of the cell cycle. *Mol. Cell. Biol.* 25: 9292-9303.
4. Kotobashi, S. and Nakayama, K. 2005. The degradation of p27 and cancer. *Nippon Rinsho* 63: 2047-2056.
5. Parcellier, A., Brunet, M., Schmitt, E., Col, E., Didelot, C., Hammann, A., Nakayama, K., Nakayama, K.I., Khochbin, S., Solary, E. and Garrido, C. 2006. HSP 27 favors ubiquitination and proteasomal degradation of p27Kip1 and helps S-phase re-entry in stressed cells. *FASEB J.* 20: 1179-1181.
6. Hattori, T., Isobe, T., Abe, K., Kikuchi, H., Kitagawa, K., Oda, T., Uchida, C. and Kitagawa, M. 2007. Pirh2 promotes ubiquitin-dependent degradation of the cyclin-dependent kinase inhibitor p27Kip1. *Cancer Res.* 67: 10789-10795.
7. Nakakuki, M., Shimano, H., Inoue, N., Tamura, M., Matsuzaka, T., Nakagawa, Y., Yahagi, N., Toyoshima, H., Sato, R. and Yamada, N. 2007. A transcription factor of lipid synthesis, sterol regulatory element-binding protein (SREBP)-1a causes G<sub>1</sub> cell-cycle arrest after accumulation of cyclin-dependent kinase (Cdk) inhibitors. *FEBS J.* 274: 4440-4452.
8. Lee, J.G. and Kay, E.P. 2008. Involvement of two distinct ubiquitin E3 ligase systems for p27 degradation in corneal endothelial cells. *Invest. Ophthalmol. Vis. Sci.* 49: 189-196.

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: RNF123 (human) mapping to 3p21.31.

## PRODUCT

RNF123 (h): 293T Lysate represents a lysate of human RNF123 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

RNF123 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RNF123 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.

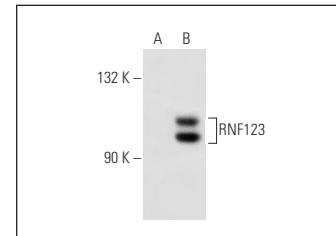
RNF123 (267.1): sc-101122 is recommended as a positive control antibody for Western Blot analysis of enhanced human RNF123 expression in RNF123 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG<sub>x</sub> BP-HRP: sc-516102 or m-IgG<sub>x</sub> 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



RNF123 (267.1): sc-101122. Western blot analysis of RNF123 expression in non-transfected: sc-117752 (**A**) and human RNF123 transfected: sc-116360 (**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](http://www.scbt.com) for detailed protocols and support products.