

Makorin-1 (h3): 293T Lysate: sc-117304

BACKGROUND

The Makorins are a family of proteins containing two to four C3H zinc fingers that may confer RNA-binding. In addition, they contain a C3HC4 RING zinc finger that allows them to function as E3 ubiquitin ligases. Makorin-1, also designated RING finger protein 61, is a ubiquitously expressed member of the Makorin family that mediates the ubiquitination of human TERT. The overexpression of Makorin-1 produces a variety of effects. In telomerase-positive cells, Makorin-1 overexpression promotes TERT degradation and reduces the activity of telomerase, leading to a reduction in telomere length. Overexpression of Makorin-1 also inhibits the transcriptional activities of c-Jun, the nuclear receptors, the androgen receptor and the retinoic acid receptors. The inhibitory activity of Makorin-1 requires both the amino and carboxy termini but not functioning ubiquitin ligase activity. The less common function of Makorin-1 as an activator also requires both the amino and carboxy termini.

REFERENCES

- Gray, T.A., Azama, K., Whitmore, K., Min, A., Abe, S. and Nicholls, R.D. 2001. Phylogenetic conservation of the Makorin-2 gene, encoding a multiple zinc-finger protein, antisense to the RAF1 proto-oncogene. *Genomics* 77: 119-126.
- Kim, J.H., Park, S.M., Kang, M.R., Oh, S.Y., Lee, T.H., Muller, M.T. and Chung, I.K. 2005. Ubiquitin ligase Makorin-1 modulates telomere length homeostasis through a proteolysis of hTERT. *Genes Dev.* 19: 776-781.
- Gray, T.A., Wilson, A., Fortin, P.J. and Nicholls, R.D. 2006. The putatively functional Makorin-1-p1 pseudogene is neither expressed nor imprinted, nor does it regulate its source gene in *trans*. *Proc. Natl. Acad. Sci. USA* 103: 12039-12044.
- Omwancha, J., Zhou, X.F., Chen, S.Y., Baslan, T., Fisher, C.J., Zheng, Z., Cai, C. and Shemshedini, L. 2006. Makorin RING finger protein 1 (Makorin-1) has negative and positive effects on RNA polymerase II-dependent transcription. *Endocrine* 29: 363-373.

CHROMOSOMAL LOCATION

Genetic locus: MKRN1 (human) mapping to 7q34.

PRODUCT

Makorin-1 (h3): 293T Lysate represents a lysate of human Makorin-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Makorin-1 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive Makorin-1 antibodies. Recommended use: 10-20 µl per lane.

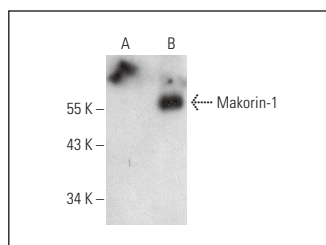
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Makorin-1 (C-8): sc-515815 is recommended as a positive control antibody for Western Blot analysis of enhanced human Makorin-1 expression in Makorin-1 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



Makorin-1 (C-8): sc-515815. Western blot analysis of Makorin-1 expression in non-transfected: sc-117752 (A) and human Makorin-1 transfected: sc-117304 (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 for detailed protocols and support products.