

Makorin-1 (Z-21): sc-133771

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

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- 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.
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CHROMOSOMAL LOCATION

Genetic locus: MKRN1 (human) mapping to 7q34; Mkrn1 (mouse) mapping to 6 B1.

SOURCE

Makorin-1 (Z-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic Makorin-1 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

Makorin-1 (Z-21) is recommended for detection of Makorin-1 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Makorin-1 siRNA (h): sc-62584, Makorin-1 siRNA (m): sc-62585, Makorin-1 shRNA Plasmid (h): sc-62584-SH, Makorin-1 shRNA Plasmid (m): sc-62585-SH, Makorin-1 shRNA (h) Lentiviral Particles: sc-62584-V and Makorin-1 shRNA (m) Lentiviral Particles: sc-62585-V.

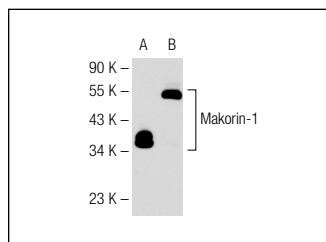
Molecular Weight of Makorin-1: 53 kDa.

Positive Controls: Makorin-1 (h3): 293T Lysate: sc-117304 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Makorin-1 (Z-21): sc-133771. 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.

PROTOCOLS

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