SANTA CRUZ BIOTECHNOLOGY, INC.

MGRN1 (LM-1A33): sc-134385

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The Power to Question

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 the ubiquitination pathway of protein degradation. MGRN1 (mahogunin, RING finger 1), also known as RNF156, is a 552 amino acid protein that contains one RING-type zinc finger and is subject to autoubiquitination. Playing a role in protein modification, MGRN1 is thought to function as an E3 ubiquitin-protein ligase, accepting ubiquitin (in the form of a thioester) from an E2 ubiquitin-conjugating enzyme and transferring that ubiquitin residue to substrates targeted for degradation. Four isoforms of MGRN1 exist due to alternative splicing events.

REFERENCES

1. Borden, K.L. and Freemont, P.S. 1996. The RING finger domain: a recent example of a sequence-structure family. Curr. Opin. Struct. Biol. 6: 395-401.
2. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 31-39.
3. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. Proc. Natl. Acad. Sci. USA 96: 11364-11369.
4. Phan, L.K., et al. 2002. The mouse mahoganoid coat color mutation disrupts a novel C3HC4 RING domain protein. J. Clin. Invest. 110: 1449-1459.
5. He, L., et al. 2003. Spongiform degeneration in mahoganoid mutant mice. Science 299: 710-712.
6. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 607559. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Kim, B.Y., et al. 2007. Spongiform neurodegeneration-associated E3 ligase mahogunin ubiquitylates TSG101 and regulates endosomal trafficking. Mol. Biol. Cell 18: 1129-1142.
8. Whatley, B.R., et al. 2008. The ubiquitin-proteasome system in spongiform degenerative disorders. Biochim. Biophys. Acta 1782: 700-712.

CHROMOSOMAL LOCATION

Genetic locus: MGRN1 (human) mapping to 16p13.3.

SOURCE

MGRN1 (LM-1A33) is a mouse monoclonal antibody raised against recombinant MGRN1 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

MGRN1 (LM-1A33) is recommended for detection of MGRN1 of 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 MGRN1 siRNA (h): sc-92983, MGRN1 shRNA Plasmid (h): sc-92983-SH and MGRN1 shRNA (h) Lentiviral Particles: sc-92983-V.

Molecular Weight (predicted) of MGRN1: 61 kDa.

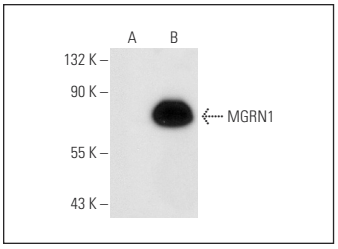
Molecular Weight (observed) of MGRN1: 74 kDa.

Positive Controls: MGRN1 (h): 293T Lysate: sc-116092.

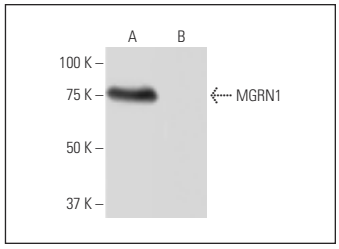
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



MGRN1 (LM-1A33): sc-134385. Western blot analysis of MGRN1 expression in non-transfected: sc-117752 (**A**) and human MGRN1 transfected: sc-116092 (**B**) 293T whole cell lysates.



MGRN1 (LM-1A33): sc-134385. Western blot analysis of MGRN1 expression in human MGRN1 transfected (**A**) and non-transfected (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Benvegnù, S., et al. 2017. Aging triggers cytoplasmic depletion and nuclear translocation of the E3 ligase mahogunin: a function for ubiquitin in neuronal survival. Mol. Cell 66: 358-372.e7.
2. Benvegnu, S., et al. 2017. E3 ligase mahogunin (MGRN1) influences amyloid precursor protein maturation and secretion. Oncotarget 8: 89439-89450.

STORAGE

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

PROTOCOLS

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