

REM2 (m): 293T Lysate: sc-123060

BACKGROUND

REM2 (RAS (RAD and GEM)-like GTP binding 2) is a 340 amino acid cell membrane protein that functions as a GTPase and belongs to the RGK family as well as the small GTPase superfamily. A suppressor of the p53 pathway, REM2 also mediates the fibroblastic growth factor 2 (FGF-2) signaling pathway and is involved in maintaining the proliferation of human embryonic stem cells. Expressed in kidney and brain, REM2 is encoded by a gene that maps to human chromosome 14q11.2. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

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2. Avramopoulos, D., et al. 2005. Linkage to chromosome 14q in Alzheimer's disease (AD) patients without psychotic symptoms. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 132B: 9-13.
3. Finlin, B.S., et al. 2005. Regulation of L-type Ca^{2+} channel activity and Insulin secretion by the Rem2 GTPase. *J. Biol. Chem.* 280: 41864-41871.
4. Bierings, R., et al. 2008. An endothelial cell genetic screen identifies the GTPase Rem2 as a suppressor of p19ARF expression that promotes endothelial cell proliferation and angiogenesis. *J. Biol. Chem.* 283: 4408-4416.
5. Larner, A.J. and Doran, M. 2009. Genotype-phenotype relationships of presenilin-1 mutations in Alzheimer's disease: an update. *J. Alzheimers Dis.* 17: 259-265.
6. Topic, A., et al. 2009. α 1-antitrypsin phenotypes in adult liver disease patients. *Ups. J. Med. Sci.* 114: 228-234.
7. Edel, M.J., et al. 2010. Rem2 GTPase maintains survival of human embryonic stem cells as well as enhancing reprogramming by regulating p53 and cyclin D1. *Genes Dev.* 24: 561-573.

CHROMOSOMAL LOCATION

Genetic locus: Rem2 (mouse) mapping to 14 C3.

PRODUCT

REM2 (m): 293T Lysate represents a lysate of mouse REM2 transfected 293T cells and is provided as 100 μ g protein in 200 μ 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.

PROTOCOLS

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

APPLICATIONS

REM2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive REM2 antibodies. Recommended use: 10-20 μ l per lane.

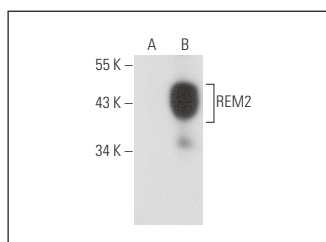
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

REM2 (D-12): sc-514898 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse REM2 expression in REM2 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 κ BP-HRP: sc-516102 or m-IgG κ 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



REM2 (D-12): sc-514898. Western blot analysis of REM2 expression in non-transfected: sc-117752 (A) and mouse REM2 transfected: sc-123060 (B) 293T whole cell lysates.

RESEARCH USE

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