

REM2 (C-11): sc-514999

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

1. Finlin, B.S., et al. 2000. REM2, a new member of the Rem/Rad/Gem/Kir family of Ras-related GTPases. *Biochem. J.* 347: 223-231.
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 p19^{ARF} 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.

CHROMOSOMAL LOCATION

Genetic locus: REM2 (human) mapping to 14q11.2; Rem2 (mouse) mapping to 14 C3.

SOURCE

REM2 (C-11) is a mouse monoclonal antibody raised against amino acids 129-165 mapping within an internal region of REM2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

REM2 (C-11) is available conjugated to agarose (sc-514999 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514999 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514999 PE), fluorescein (sc-514999 FITC), Alexa Fluor® 488 (sc-514999 AF488), Alexa Fluor® 546 (sc-514999 AF546), Alexa Fluor® 594 (sc-514999 AF594) or Alexa Fluor® 647 (sc-514999 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514999 AF680) or Alexa Fluor® 790 (sc-514999 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

REM2 (C-11) is recommended for detection of REM2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for REM2 siRNA (h): sc-92154, REM2 siRNA (m): sc-152799, REM2 shRNA Plasmid (h): sc-92154-SH, REM2 shRNA Plasmid (m): sc-152799-SH, REM2 shRNA (h) Lentiviral Particles: sc-92154-V and REM2 shRNA (m) Lentiviral Particles: sc-152799-V.

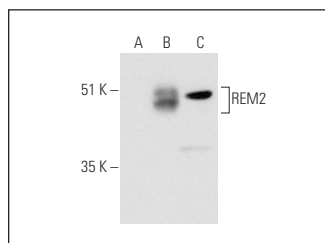
Molecular Weight of REM2: 37 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, HeLa whole cell lysate: sc-2200 or REM2 (m): 293T Lysate: sc-123060.

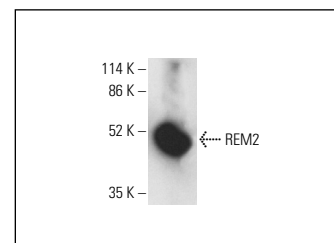
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



REM2 (C-11): sc-514999. Western blot analysis of REM2 expression in non-transfected 293T: sc-117752 (A), mouse REM2 transfected 293T: sc-123060 (B) and Caki-1 (C) whole cell lysates.



REM2 (C-11): sc-514999. Western blot analysis of REM2 expression in HeLa whole cell lysate. Detection reagent used: m-IgG κ BP-HRP: sc-525408.

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.

PROTOCOLS

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