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RAP (E-7): sc-515625

BACKGROUND

Members of the LDL receptor gene family, including LDLR (low density lipoprotein receptor), LRP (low density lipoprotein related protein), Megalin (also designated GP330), VLDLR (very low density lipoprotein receptor) and ApoER2, are characterized by a cluster of cysteine-rich class A repeats, epidermal growth factor (EGF)-like repeats, YWTD repeats and an O-linked sugar domain. LRP, also designated α -2-Macroglobulin receptor, is an endocytic receptor that mediates the uptake of at least 15 ligands, including α -2-Macroglobulin and apoE. LRP is cleaved into a membrane subunit and an extracellular subunit, which remain non-covalently associated. Proper folding and trafficking of LRP is facilitated by the receptor-associated protein (RAP), a molecular chaperone. The uptake of all known ligands through LRP can be blocked by RAP, which induces a conformational change in the receptor that renders it unable to bind ligands. LRP, which is expressed in brain, liver and lung, is also implicated in Alzheimer's disease (AD), as the human LRP gene localizes to a potential AD locus on chromosome 12.

REFERENCES

1. Vash, B., et al. 1998. Three complement-type repeats of the low-density lipoprotein receptor-related protein define a common binding site for RAP, PAI-1 and lactoferrin. *Blood* 92: 3277-3285.
2. Trommsdorff, M., et al. 1999. Reeler/disabled-like disruption of neuronal migration in knockout mice lacking the VLDL receptor and apoE receptor 2. *Cell* 97: 689-701.
3. Mikhailenko, I., et al. 1999. Functional domains of the very low density lipoprotein receptor: molecular analysis of ligand binding and acid-dependent ligand dissociation mechanisms. *J. Cell Sci.* 112: 3269-3281.
4. Lambert, J.C., et al. 1999. Is the LDL receptor-related protein involved in Alzheimer's disease? *Neurogenetics* 2: 109-113.

CHROMOSOMAL LOCATION

Genetic locus: LRPAP1 (human) mapping to 4p16.3; Lrpap1 (mouse) mapping to 5 B2.

SOURCE

RAP (E-7) is a mouse monoclonal antibody raised against amino acids 230-357 mapping at the C-terminus of RAP 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.

RAP (E-7) is available conjugated to agarose (sc-515625 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515625 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515625 PE), fluorescein (sc-515625 FITC), Alexa Fluor® 488 (sc-515625 AF488), Alexa Fluor® 546 (sc-515625 AF546), Alexa Fluor® 594 (sc-515625 AF594) or Alexa Fluor® 647 (sc-515625 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515625 AF680) or Alexa Fluor® 790 (sc-515625 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

RAP (E-7) is recommended for detection of RAP 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 RAP siRNA (h): sc-44068, RAP siRNA (m): sc-152700, RAP shRNA Plasmid (h): sc-44068-SH, RAP shRNA Plasmid (m): sc-152700-SH, RAP shRNA (h) Lentiviral Particles: sc-44068-V and RAP shRNA (m) Lentiviral Particles: sc-152700-V.

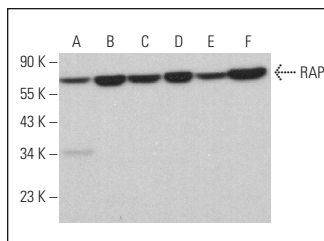
Molecular Weight of RAP: 39 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

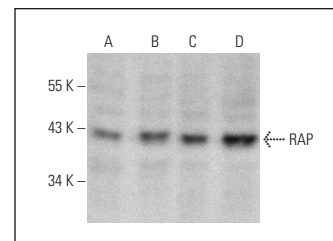
RECOMMENDED SUPPORT REAGENTS

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



RAP (E-7): sc-515625. Western blot analysis of RAP expression in RAT2 (A), c4 (B), P19 (C), Neuro-2A (D), C6 (E) and AtT-20/D16V-F2 (F) whole cell lysates.



RAP (E-7): sc-515625. Western blot analysis of RAP expression in A549 (A), RT-4 (B), HeLa (C) and Hep G2 (D) whole cell lysates.

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.