

# RAP (7F1): sc-59675

## 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  $\alpha$ -2-Macroglobulin receptor, is an endocytic receptor that mediates the uptake of at least 15 ligands, including  $\alpha$ -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

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4. Lambert, J.C., et al. 1999. Is the LDL receptor-related protein involved in Alzheimer's disease? *Neurogenetics* 2: 109-113.
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6. Kang, D.E., et al. 2000. Modulation of Amyloid  $\beta$ -protein clearance and Alzheimer's disease susceptibility by the LDL receptor-related protein pathway. *J. Clin. Invest.* 106: 1159-1166.
7. Bu, G. and Marzolo, M.P. 2000. Role of RAP in the biogenesis of lipoprotein receptors. *Trends Cardiovasc. Med.* 10: 148-155.
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## CHROMOSOMAL LOCATION

Genetic locus: LRPAP1 (human) mapping to 4p16.3.

## SOURCE

RAP (7F1) is a mouse monoclonal antibody raised against full length RAP of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

RAP (7F1) is recommended for detection of RAP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) 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 shRNA Plasmid (h): sc-44068-SH and RAP shRNA (h) Lentiviral Particles: sc-44068-V.

Molecular Weight of RAP: 39 kDa.

## 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](http://www.scbt.com) for detailed protocols and support products.