SANTA CRUZ BIOTECHNOLOGY, INC.

VLDLR (1H10): sc-81698

BACKGROUND

VLDLR (very low density lipoprotein receptor) is a member of the LDL receptor gene family, which includes LDL receptor, LRP, megalin, VLDLR and ApoER2. The LDL receptor family is characterized by a cluster of cysteine-rich class A repeats, epidermal growth factor (EGF)-like repeats, YWTD repeats and an O-linked sugar domain. VLDLR is expressed in brain, heart, skeletal muscle and adipose tissue. It associates with RAP (receptor associated protein) during receptor folding, and RAP facilitates the secretion of the extracellular region of VLDLR. VLDLR is thought to mediate the interaction of extracellular Reelin and cytosolic mDab1 (mammalian disabled protein), which activates a tyrosine kinase. This pathway regulates the migration of neurons along the radial glial fiber network during brain development.

REFERENCES

1. 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.
2. 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.
3. Tiebel, O., et al. 1999. Mouse very low density lipoprotein receptor (VLDLR): gene structure, tissue-specific expression and dietary and development regulation. Atherosclerosis 145: 239-251.
4. Savonen, R., et al. 1999. The carboxyl-terminal domain of receptor-associated protein facilitates proper folding and trafficking of the very low density lipoprotein receptor by interaction with the three amino-terminal ligand-binding repeats of the receptor. J. Biol. Chem. 274: 25877-25882.
5. Sato, A., et al. 1999. 39 kDa receptor-associated protein (RAP) facilitates secretion and ligand binding of extracellular region of very low density lipoprotein receptor: implication for a distinct pathway from low density lipoprotein receptor. Biochem. J. 341: 377-383.
6. Hiesberger, T., et al. 1999. Direct binding of Reelin to VLDL receptor and ApoE receptor 2 induces tyrosine phosphorylation of disabled-1 and modulates τ phosphorylation. Neuron 24: 481-489.
7. D'Arcangelo, G., et al. 1999. Reelin is a ligand for lipoprotein receptors. Neuron 24: 471-479.

CHROMOSOMAL LOCATION

Genetic locus: VLDLR (human) mapping to 9p24.

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 or our catalog for detailed protocols and support products.

SOURCE

VLDLR (1H10) is a mouse monoclonal antibody raised against VLDLR of human origin, with epitope mapping to the C-terminus.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

VLDLR (1H10) is recommended for detection of VLDLR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for VLDLR siRNA (h): sc-36822.

Molecular Weight of unglycosylated VLDLR: 143 kDa.

Molecular Weight of fully processed, glycosylated VLDLR: 161 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

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