

LDLR (D-17): sc-11823

BACKGROUND

LDLR (low density lipoprotein receptor) is a member of the LDL receptor gene family, which includes LDLR, 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. The LDL receptor is a cell surface transmembrane protein that mediates the uptake of low density lipoprotein and its degradation in the lysosome, which provides cholesterol to cells. The cytoplasmic domain of the LDL receptor is necessary for the receptor to cluster in coated pits, which promotes the rapid endocytosis of bound LDL. Mutations in LDLR cause the autosomal dominant disease familial hypercholesterolemia (FH), which promotes premature coronary atherosclerosis.

REFERENCES

1. Davis, C.G., et al. 1986. The J.D. mutation in familial hypercholesterolemia: amino acid substitution in cytoplasmic domain impedes internalization of LDL receptors. *Cell* 45: 15-24.
2. Davis, C.G., et al. 1987. The low density lipoprotein receptor. Identification of amino acids in cytoplasmic domain required for rapid endocytosis. *J. Biol. Chem.* 262: 4075-4082.
3. Hobbs, H.H., et al. 1992. Molecular genetics of the LDL receptor gene in familial hypercholesterolemia. *Hum. Mutat.* 1: 445-466.
4. Fass, D., et al. 1997. Molecular basis of familial hypercholesterolemia from structure of LDL receptor module. *Nature* 388: 691-693.
5. Day, I.N., et al. 1997. Spectrum of LDL receptor gene mutations in heterozygous familial hypercholesterolemia. *Hum. Mutat.* 10: 116-127.
6. 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.
7. 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.

CHROMOSOMAL LOCATION

Genetic locus: LDLR (human) mapping to 19p13.2.

SOURCE

LDLR (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LDLR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11823 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

LDLR (D-17) is recommended for detection of LDLR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 LDLR siRNA (h): sc-35802, LDLR shRNA Plasmid (h): sc-35802-SH and LDLR shRNA (h) Lentiviral Particles: sc-35802-V.

Molecular Weight of LDLR: 160 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263 or Raji whole cell lysate: sc-364236.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Kuhn, D.J., et al. 2004. Direct inhibition of the ubiquitin-proteasome pathway by ester bond-containing green tea polyphenols is associated with increased expression of sterol regulatory element-binding protein 2 and LDL receptor. *Biochim. Biophys. Acta* 1682: 1-10.
2. Cal Pérez-Quevedo, Roi. 2013. Papel del receptor low density lipoprotein receptor-related protein 1 (LRP1) en la isquemia y fisiopatología cardiovascular.

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.



Try **LDLR (C7): sc-18823** or **LDLR (F-7): sc-373830**, our highly recommended monoclonal alternatives to LDLR (D-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **LDLR (C7): sc-18823**.