

LDLR (B-10): sc-373831

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 (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 13-47 near the N-terminus of LDLR of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

LDLR (B-10) is recommended for detection of LDLR of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 LDLR siRNA (h): sc-35802, LDLR shRNA Plasmid (h): sc-35802-SH and LDLR shRNA (h) Lentiviral Particles: sc-35802-V.

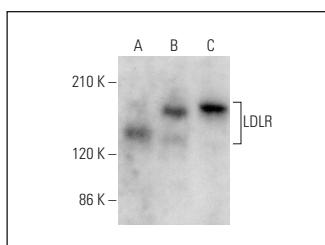
Molecular Weight of LDLR: 160 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, GA-10 whole cell lysate: sc-364230 or HeLa whole cell lysate: sc-2200.

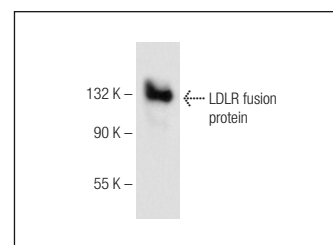
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



LDLR (B-10): sc-373831. Western blot analysis of LDLR expression in Raji (A), GA-10 (B) and HeLa (C) whole cell lysates.



LDLR (B-10): sc-373831. Western blot analysis of human recombinant LDLR fusion protein.

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.



See **LDLR (C7): sc-18823** for LDLR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.