SANTA CRUZ BIOTECHNOLOGY, INC.

LDLR (C7): sc-18823

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: LDLR (human) mapping to 19p13.2; Ldlr (mouse) mapping to 9 A3.

SOURCE

LDLR (C7) is a mouse monoclonal antibody raised against partially purified adrenal LDL receptor of bovine 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.

LDLR (C7) is available conjugated to agarose (sc-18823 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-18823 PE), fluorescein (sc-18823 FITC), Alexa Fluor® 488 (sc-18823 AF488), Alexa Fluor® 546 (sc-18823 AF546), Alexa Fluor® 594 (sc-18823 AF594) or Alexa Fluor® 647 (sc-18823 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-18823 AF680) or Alexa Fluor® 790 (sc-18823 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LDLR (C7) is recommended for detection of LDLR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

LDLR (C7) is also recommended for detection of LDLR in additional species, including bovine.

Suitable for use as control antibody for LDLR siRNA (h): sc-35802, LDLR siRNA (m): sc-35803, LDLR shRNA Plasmid (h): sc-35802-SH, LDLR shRNA Plasmid (m): sc-35803-SH, LDLR shRNA (h) Lentiviral Particles: sc-35802-V and LDLR shRNA (m) Lentiviral Particles: sc-35803-V.

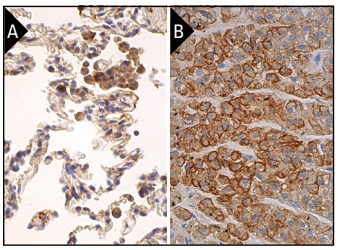
Molecular Weight of LDLR: 160 kDa.

Positive Controls: human adrenal gland extract: sc-363761, CCD-1064Sk cell lysate: sc-2263 or Raji whole cell lysate: sc-364236.

STORAGE

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

DATA



LDLR (C7): sc-18823. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing membrane and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Michaely, P., et al. 2004. The modular adaptor protein ARH is required for low density lipoprotein (LDL) binding and internalization but not for LDL receptor clustering in coated pits. J. Biol. Chem. 279: 34023-34031.
2. London, E., et al. 2015. Cholesterol biosynthesis and trafficking in cortisol-producing lesions of the adrenal cortex. J. Clin. Endocrinol. Metab. 100: 3660-3667.
3. Dong, H., et al. 2017. Identification of roles for H264, H306, H439, and H635 in acid-dependent lipoprotein release by the LDL receptor. J. Lipid Res. 58: 364-374.
4. Wang, L., et al. 2018. Novel interactomics approach identifies ABCA1 as direct target of evodiamine, which increases macrophage cholesterol efflux. Sci. Rep. 8: 11061.
5. Sun, Y., et al. 2019. The endonuclease APE1 processes miR-92b formation, thereby regulating expression of the tumor suppressor LDLR in cervical cancer cells. Ther. Adv. Med. Oncol. 11: 1758835919855859.
6. Hong, C.S., et al. 2020. Increased small extracellular vesicle secretion after chemotherapy via upregulation of cholesterol metabolism in acute myeloid leukaemia. J. Extracell. Vesicles 9: 1800979.
7. Goedeke, L., et al. 2021. MMAB promotes negative feedback control of cholesterol homeostasis. Nat. Commun. 12: 6448.
8. Xiang, X., et al. 2022. Impaired reciprocal regulation between SIRT6 and TGF-β signaling in fatty liver. FASEB J. 36: e22335.
9. Fukawa, M., et al. 2023. Extracellular HSPA5 is autocrinally involved in the regulation of neuronal process elongation. Biochem. Biophys. Res. Commun. 664: 50-58.

RESEARCH USE

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