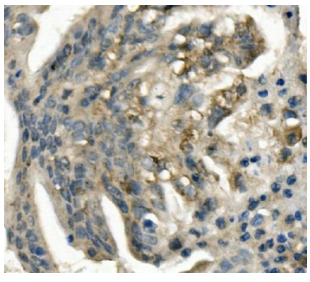
LDL Receptor Antibody / LDLR (RQ5984)

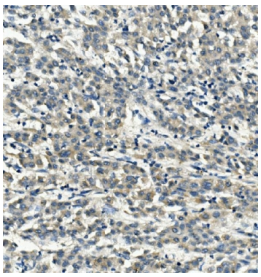
Catalog No.	Formulation	Size
RQ5984	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

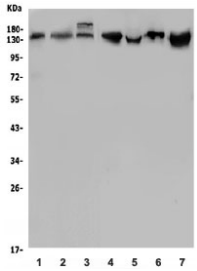
Availability	1-3 business days
Species Reactivity	Human, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P01130
Localization	Cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry: 1-2ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This LDL Receptor antibody is available for research use only.



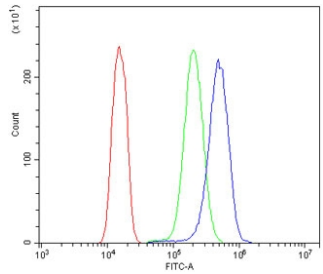
Immunohistochemistry analysis of LDL Receptor Antibody in human rectal cancer tissue. FFPE human rectal carcinoma demonstrates cytoplasmic and membranous HRP-DAB brown staining in tumor epithelial cells, consistent with LDL receptor (LDLR) expression involved in lipid uptake and metabolic activity, while surrounding stromal cells show lower staining intensity. Antigen retrieval was performed by boiling tissue sections in EDTA buffer, pH 8.0, for 20 minutes followed by cooling prior to incubation with LDL Receptor antibody.



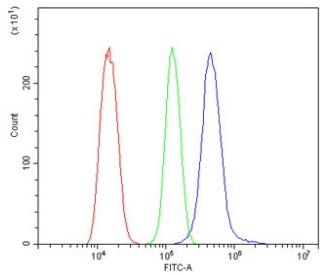
IHC staining of FFPE human liver cancer with LDL Receptor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot testing of 1) human HeLa, 2) human Raji, 3) human U-87 MG, 4) rat lung, 5) rat kidney and 6) rat RH35 lysate with LDL Receptor antibody. Expected molecular weight: 95-160 kDa depending on glycosylation level.



Flow cytometry testing of human A431 cells with LDL Receptor antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= LDL Receptor antibody.



Flow cytometry testing of human NRK cells with LDL Receptor antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= LDL Receptor antibody.

Description

LDL receptor antibody recognizes Low density lipoprotein receptor, a type I transmembrane glycoprotein that plays a central role in cholesterol homeostasis and lipoprotein metabolism. The LDL receptor is primarily localized to the plasma membrane and endocytic vesicles of hepatocytes and other peripheral cells, where it mediates uptake of circulating low density lipoprotein particles. LDL Receptor Antibody supports research into lipid metabolism, cardiovascular disease, and receptor-mediated endocytosis pathways.

The LDLR gene is located on chromosome 19p13.2 and encodes a multi-domain protein composed of ligand-binding repeats, epidermal growth factor-like repeats, an O-linked glycosylation domain, a single transmembrane segment, and a cytoplasmic tail containing motifs required for clathrin-mediated internalization. The receptor binds apolipoprotein B100 and apolipoprotein E-containing lipoproteins, internalizes them via coated pits, and delivers cholesterol to cells following lysosomal processing. LDL Receptor Antibody facilitates investigation of receptor expression, trafficking, and regulation in hepatic and extrahepatic tissues.

LDL receptor expression is highest in liver, adrenal gland, and steroidogenic tissues, where cholesterol uptake is critical for membrane synthesis and hormone production. Expression levels are tightly regulated by intracellular cholesterol concentration through sterol regulatory element-binding protein signaling pathways. Mutations in LDLR are a well-

established cause of familial hypercholesterolemia, leading to elevated plasma LDL cholesterol and increased risk of premature atherosclerosis. LDL Receptor Antibody is therefore valuable for studying genetic lipid disorders and mechanisms of cholesterol regulation.

Altered LDL receptor expression has also been implicated in metabolic syndrome, diabetes, and certain cancers, where lipid uptake and metabolic reprogramming contribute to disease progression. In addition, LDL receptor-mediated pathways are explored in drug delivery and nanoparticle targeting strategies due to the receptor's efficient endocytic capacity. LDL Receptor Antibody enables detailed analysis of receptor abundance, localization, and regulation in these research contexts.

By targeting a key regulator of cholesterol metabolism and cardiovascular risk, LDL Receptor Antibody provides a reliable tool for investigating lipid homeostasis, receptor signaling, and metabolic disease mechanisms in basic and translational research.

Application Notes

Optimal dilution of the LDL Receptor antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids Q35-D843) was used as the immunogen for the LDL Receptor antibody.

Storage

After reconstitution, the LDL Receptor antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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