abcam

ab276036

Anti-LDL Receptor antibody [301] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human Low-density lipoprotein receptor aa 1-800. The exact immunogen used to generate this antibody is proprietary information. Database link P01130
Carrier free	Yes
Clone number	301
Purification technique	Affinity purification Protein A

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/25 - 1/100
Notes	-

Target data

See full target information Low-density lipoprotein receptor

Function

Binds low density lipoprotein /LDL, the major cholesterol-carrying lipoprotein of plasma, and transports it into cells by endocytosis. In order to be internalized, the receptor-ligand complexes must first cluster into clathrin-coated pits. Forms a ternary complex with PGRMC1 and TMEM97 receptors which increases LDLR-mediated LDL internalization (PubMed:30443021). (Microbial infection) Acts as a receptor for hepatitis C virus in hepatocytes, but not through a direct interaction with viral proteins. (Microbial infection) Acts as a receptor for Vesicular stomatitis virus. (Microbial infection) In case of HIV-1 infection, may function as a receptor for extracellular Tat in neurons, mediating its internalization in uninfected cells. (Microbial infection) Acts as a receptor for Crimean-Congo hemorrhagic fever virus (CCHFV). (Microbial infection) Acts as a receptor for many Alphavirus, including Getah virus (GETV), Ross river virus (RRV) and Semliki Forest virus.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary

The LDL Receptor also called LDLR is a protein that plays an important role in the uptake and clearance of low-density lipoproteins (LDL) from the bloodstream. LDLR binds LDL particles facilitating their internalization through receptor-mediated endocytosis. This receptor is expressed mainly in the liver adrenal glands and

	other tissues involved in cholesterol metabolism. It has an approximate molecular weight of 160 kDa. Researchers often study LDLR using techniques like Western blotting to understand its presence and function.
Biological function summary	The LDL receptor interacts with LDL particles to regulate cholesterol levels in the body. It is part of a cell surface complex that recognizes and binds to apolipoprotein B-100 or apolipoprotein E present on LDL. This interaction initiates internalization of LDL leading to its degradation in lysosomes where cholesterol can be released and used by the cell. Mutations in the gene encoding LDLR can lead to inefficient cholesterol uptake influencing various metabolic processes.
Pathways	LDL receptor activities are integral to lipid metabolism and cholesterol homeostasis. Two important biological pathways that involve LDLR include the cholesterol biosynthesis pathway and the lipoprotein clearance pathway. Within these pathways LDLR collaborates closely with proteins like PCSK9 which modulates its expression and degradation and HMG-CoA reductase an important enzyme in cholesterol synthesis to balance cholesterol levels in the body.
Associated diseases and disorders	Defects in the LDL receptor are strongly associated with familial hypercholesterolemia and atherosclerosis. These conditions arise from impaired clearance of LDL leading to elevated cholesterol levels which pose risks for cardiovascular diseases. LDLR dysfunctions are linked with the Protein PCSK9 whose gain-of-function mutations can exacerbate hypercholesterolemia by promoting degradation of LDLR while statins aim to increase LDLR expression to lower LDL cholesterol levels.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

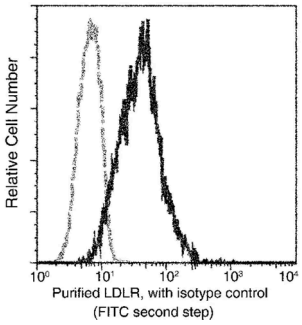
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Flow Cytometry - Anti-LDL Receptor antibody [301] - BSA and Azide free (ab276036)

LDL Receptor Flow Cytometry staining using rabbit Anti-LDL Receptor antibody

Flow cytometric analysis of LDLR expression on HepG2 cells. Cells were stained with ab276036 (Black) at 1/25 dilution or an isotype control (Grey), then a FITC-conjugated secondary antibody. The histogram was derived from gated events with the forward and side light-scatter characteristics of intact cells.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.