abcam

ab314935

Anti-LDL Receptor antibody [EPR1-EUG] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR1-EUG
Purification technique	Affinity purification Protein A
Concentration	1.02 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human, Mouse
Dilution info	-

Notes	-

Not recommended

Species	Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

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.

Storage

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

Notes

ab314935 is the carrier-free version of ab314934.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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.

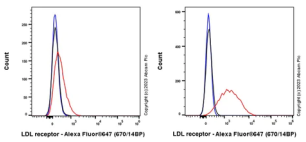
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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4 product images

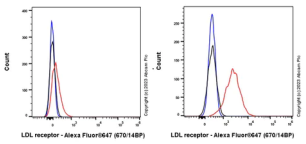


Flow Cytometry - Anti-LDL Receptor antibody [EPR1-EUG] - BSA and Azide free (ab314935)

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

This data was developed using ab314934, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of LNCaP (human prostate carcinoma epithelial cell, Left) / PC-3 (human prostate adenocarcinoma epithelial cell, Right) cells labelling LDL Receptor with ab314934 at 1/5000 dilution (0.01 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 647) at 1/5000 dilution was used as the secondary antibody. Low expression: LNCaP. Gated on viable cells.

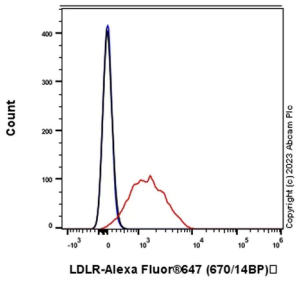


Flow Cytometry - Anti-LDL Receptor antibody [EPR1-EUG] - BSA and Azide free (ab314935)

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

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Flow cytometric analysis of HEK-293 (human embryonic kidney epithelial cell, Left) / Huh7 (human hepatocellular carcinoma epithelial cell, Right) cells labelling LDL Receptor with ab314934 at 1/5000 dilution (0.01 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 647) at 1/5000 dilution was used as the secondary antibody. Low expression: HEK-293. Gated on viable cells.

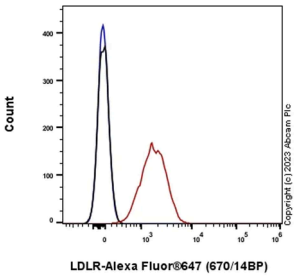


Flow Cytometry - Anti-LDL Receptor antibody [EPR1-EUG] - BSA and Azide free (ab314935)

LDL Receptor Flow Cytometry staining of Hepa1-6 (mouse hepatoma epithelial cell) using rabbit Anti-LDL Receptor antibody

This data was developed using ab314934, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Hepa1-6 (mouse hepatoma epithelial cell) labelling LDL Receptor with ab314934 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 647) at 1/5000 dilution was used as the secondary antibody.



Flow Cytometry - Anti-LDL Receptor antibody [EPR1-EUG] - BSA and Azide free (ab314935)

LDL Receptor Flow Cytometry staining of RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) cells using rabbit Anti-LDL Receptor antibody

This data was developed using ab314934, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) cells labelling LDL Receptor with ab314934 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 647) at 1/5000 dilution was used as the secondary antibody.

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