# Anti-LDL Receptor antibody [EP1553Y] ab52818

**Product name**  
Anti-LDL Receptor antibody [EP1553Y]

**Description**  
Rabbit monoclonal [EP1553Y] to LDL Receptor

**Host species**  
Rabbit

**Tested applications**  
Suitable for: ICC/IF, IHC-P, WB, Flow Cyt

**Species reactivity**  
Reacts with: Mouse, Human

**Immunogen**  
Synthetic peptide within Human LDL Receptor (C terminal). The exact sequence is proprietary.

**Positive control**  
HepG2 cells and cell lysate

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

This product is a recombinant rabbit monoclonal antibody.

## Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.</td>
</tr>
</tbody>
</table>
| **Storage buffer** | pH: 7.20  
Preservative: 0.01% Sodium azide  
Constituents: 59% PBS, 40% Glycerol, 0.1% BSA |
| **Purity**     | Protein A purified                                                      |
| **Clonality**  | Monoclonal                                                             |
| **Clone number** | EP1553Y                                                                |
| **Isotype**    | IgG                                                                     |
Function
Binds 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. In case of HIV-1 infection, functions as a receptor for extracellular Tat in neurons, mediating its internalization in uninfected cells.

Involvement in disease
Defects in LDLR are the cause of familial hypercholesterolemia (FH) [MIM:143890]; a common autosomal semi-dominant disease that affects about 1 in 500 individuals. The receptor defect impairs the catabolism of LDL, and the resultant elevation in plasma LDL-cholesterol promotes deposition of cholesterol in the skin (xanthelasma), tendons (xanthomas), and coronary arteries (atherosclerosis).

Sequence similarities
Belongs to the LDLR family. Contains 3 EGF-like domains. Contains 7 LDL-receptor class A domains. Contains 6 LDL-receptor class B repeats.

Post-translational modifications
N- and O-glycosylated. Ubiquitinated by MYLIP leading to degradation.

Cellular localization

Target

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td>★★★★★</td>
<td>1/100 - 1/250.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>1/500.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See IHC antigen retrieval protocol.</td>
</tr>
<tr>
<td>WB</td>
<td>★★★★★</td>
<td>1/5000. Detects a band of approximately 100 kDa (predicted molecular weight: 95 kDa).</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>★★★★★</td>
<td>1/70 - 1/100.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
</tr>
</tbody>
</table>

Images
Western blot - Anti-LDL Receptor antibody [EP1553Y] (ab52818)

All lanes: Anti-LDL Receptor antibody [EP1553Y] (ab52818) at 1/1000 dilution

Lane 1: HeLa cell lysate
Lane 2: HeLa treated with GW3965 for 8 hours at the final concentration of 5uM whole cell lysates
Lane 3: HeLa treated with GW3965 for 24 hours at the final concentration of 5uM whole cell lysates
Lane 4: Raw264.7 whole cell lysates
Lane 5: Raw264.7 treated with GW3965 for 8 hours at the final concentration of 5uM whole cell lysates
Lane 6: Raw264.7 treated with GW3965 for 24 hours at the final concentration of 5uM whole cell lysates

Lysates/proteins at 20 µg per lane.

Secondary
All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution (HRP goat anti-rabbit IgG (H+L))

Predicted band size: 95 kDa
Observed band size: 140 kDa

Exposure time: 1 minute

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling LDL Receptor with purified ab52818 at 1/100. Cells were fixed with 4% Paraformaldehyde and permeabilized using 0.1% Triton X-100. ab150077, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. Cells were co-stained with ab7291, a mouse anti-tubulin antibody (1/1000) using ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000) as the secondary. Nuclei were counterstained with DAPI (blue).

For negative control 1, rabbit primary antibody and anti-mouse secondary antibody (ab150120) were used. For negative control 2, mouse primary antibody (ab7291) and anti-rabbit secondary antibody (ab150077) were used.
Anti-LDL Receptor antibody [EP1553Y] (ab52818) at 0.4 µg/ml + HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

**Secondary**
Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size:** 95 kDa

**Exposure time:** 3 minutes

Blocking and diluting buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with the literature (PMID: 15199428, PMID: 8349823, PMID: 10906332, PMID: 24918045).

Immunohistochemical analysis of paraffin-embedded human liver sections labelling LDL Receptor with purified ab52818 at dilution of 1:500. The secondary antibody used was ab97051; a goat anti-rabbit IgG H&L (HRP) at dilution of 1/500. The sample was counterstained with hematoxylin. Antigen retrieval was performed using EDTA Buffer; pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.
Overlay histogram showing 4% paraformaldehyde fixed HeLa cells labelling LDL Receptor (red) with purified ab52818 at dilution of 1/70. The secondary antibody used was Alexa Fluor® 488 goat-anti-rabbit IgG at dilution of 1/2000. A nonspecific IgG antibody (rabbit monoclonal) was used as isotype control (black). The blue line shows cells without incubation with primary antibody and secondary antibody.

**Flow Cytometry - Anti-LDL Receptor antibody**
[EP1553Y] (ab52818)

**Western blot - Anti-LDL Receptor antibody**
[EP1553Y] (ab52818) at 1/1000 dilution

**All lanes** : Anti-LDL Receptor antibody [EP1553Y] (ab52818) at 1/1000 dilution

**Lane 1** : mouse liver lysate
**Lane 2** : mouse lung lysate
**Lane 3** : mouse colon lysate
**Lane 4** : human liver lysate
**Lane 5** : HepG2 cell lysate
**Lane 6** : HeLa cell lysate

Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/1000 dilution (HRP goat anti-rabbit IgG (H+L))

**Predicted band size**: 95 kDa
**Observed band size**: 140 kDa

**Exposure time**: 3 minutes

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST
Immunohistochemical analysis of paraffin-embedded human hepatocellular carcinoma tissue labeling LDL Receptor with ab52818 at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.

Western blot - Anti-LDL Receptor antibody [EP1553Y] (ab52818) at 1/5000 dilution + Mouse liver at 15 µg

Secondary
Goat Anti-Rabbit IgG H&L (HRP) (ab97051)

Predicted band size: 95 kDa
Observed band size: 140 kDa

Blocking/Diluting buffer 5% NFDM/TBST

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling LDL Receptor with ab52818 at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.
Immunochemistry/ Immunofluorescence - Anti-LDL Receptor antibody [EP1553Y] (ab52818)

ICC/IF image of ab52818 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab52818, 5µg/ml) overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-rabbit IgG - H&L, pre-adsorbed (ab96899) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Flow Cytometry - Anti-LDL Receptor antibody [EP1553Y] (ab52818)

Overlay histogram showing U937 cells stained with ab52818 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab52818, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit monoclonal IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.
Anti-LDL Receptor antibody [EP1553Y] (ab52818) at 1/500 dilution + Human Plasma Total Protein Lysate at 10 µg

**Secondary**
Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 95 kDa  
**Observed band size:** 100 kDa  
**Additional bands at:** 27 kDa, 48 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 4 minutes

LDL Receptor contains a number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted.

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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