

# Human CellExp™ LDL R, Fc Tag, Human recombinant

LDLR, FH, FHC, LDLCQ2 Catalog # PBV11608r

#### **Specification**

## Human CellExp™ LDL R, Fc Tag, Human recombinant - Product info

Primary Accession P01130

Calculated MW 111.4 kDa KDa

#### Human CellExp™ LDL R, Fc Tag, Human recombinant - Additional Info

Gene ID 3949

**Other Names** 

LDLR, FH, FHC, LDLCQ2

Gene Source Mouse

Source HEK 293 cells Assay&Purity SDS-PAGE;> 95%

Recombinant Yes

Target/Specificity

**LDLR** 

### **Application Notes**

Reconstitute in sterile deionized water to the desired protein concentration.

## **Format**

Lyophilized

#### **Storage**

-20°C;Lyophilized from 0.22  $\mu m$  filtered solution in PBS, pH7.4. Normally Trehalose is added as protectant before lyophilization.

### Human CellExp™ LDL R, Fc Tag, Human recombinant - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Human CellExp™ LDL R, Fc Tag, Human recombinant - Images

Human CellExp™ LDL R, Fc Tag, Human recombinant - Background





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Low-Density Lipoprotein (LDL) Receptor is also known as LDLR, FH, FHC, LDLCQ2, and is a mosaic protein of ~840 amino acids (after removal of signal peptide) that mediates the endocytosis of cholesterol-rich LDL. It is a cell-surface receptor that recognizes the apoprotein B100 which is embedded in the phospholipid outer layer of LDL particles. The receptor also recognizes the apoE protein found in chylomicron remnants and VLDL remnants (IDL). It belongs to the Low density lipoprotein receptor gene family. LDL receptor complexes are present in clathrin-coated pits (or buds) on the cell surface, which when bound to LDL-cholesterol via adaptin, are pinched off to form clathrin-coated vesicles inside the cell. This allows LDL-cholesterol to be bound and internalized in a process known as endocytosis and prevents the LDL just diffusing around the membrane surface. This occurs in all nucleated cells (not erythrocytes), but mainly in the liver which removes ~70% of LDL from the circulation. Synthesis of receptors in the cell is regulated by the level of free intracellular cholesterol; if it is in excess for the needs of the cell then the transcription of the receptor gene will be inhibited. LDL receptors are translated by ribosomes on the endoplasmic reticulum and are modified by the Golgi apparatus before travelling in vesicles to the cell surface. LDL is directly involved in the development of atherosclerosis, due to accumulation of LDL-cholesterol in the blood. Atherosclerosis is the process responsible for the majority of cardiovascular diseases.