

## Recombinant Human LDLR protein, Fc-tagged

Cat. No. LDLR-335H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human LDLR protein (Ala22-Arg788), fused to human IgG1 Fc tag at C-terminus, was expressed in human 293 cells (HEK293).

**Species** Human

**Source** HEK293

**ProteinLength** 767

#### Description

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

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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.

**Form**

Lyophilized from 0.22 um filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5, 10% trehalose.

**Molecular Mass**

The protein has a calculated MW of 111.4 kDa. As a result of glycosylation, the protein migrates as 155-175 kDa under reducing (R) condition, and 310-350 kDa under non-reducing (NR) condition (SDS-PAGE).

**Endotoxin**

Less than 1.0 EU per ug by the LAL method.

**Purity**

>90% as determined by SDS-PAGE.

**Storage**

For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

-20 centigrade to -70 centigrade for 12 months in lyophilized state;

-70 centigrade for 3 months under sterile conditions after reconstitution.

**Reconstitution**

It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

## GENE INFORMATION

**Gene Name**

LDLR

**Official Symbol**

LDLR

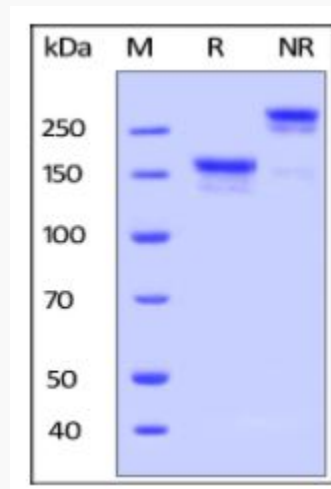
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<b>Synonyms</b>	FH; FHC; FHCL1; LDLCQ2
<b>Gene ID</b>	3949
<b>mRNA Refseq</b>	NM_000527.5
<b>Protein Refseq</b>	NP_000518.1
<b>MIM</b>	606945
<b>UniProt ID</b>	P01130

**SDS-PAGE of LDLR-335H**



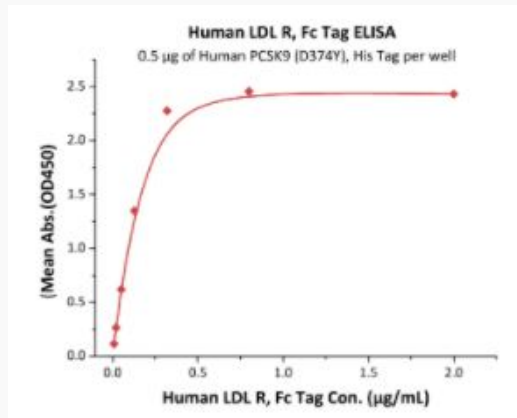
Human LDLR, Fc Tag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

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**Bioactivity-ELISA of  
LDLR-335H**



Immobilized Human PCSK9 (D374Y), His Tag at 5 µg/mL (100 µL/well) can bind Human LDLR, Fc Tag with a linear range of 0.008-0.32 µg/mL (QC tested).

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