Human CellExp™ LDLR, human recombinant

CATALOG #: 7472-10 10 µg
7472-50 50 µg

ALTERNATE NAMES: LDLR, FH, FHC, LDLCQ2, Low-Density Lipoprotein (LDL) Receptor

SOURCE: HEK 293 cells (Ala 22 – Arg 788)

PURITY: ≥ 90% by SDS-PAGE gel

MOL. WEIGHT: This protein is fused with a C-terminal 6×his tag and has a calculated MW of 86 kDa. The predicted N-terminal is Ala22 or Asp193. Corresponding to the mature and immature form, DTT-reduced protein migrates as 95-110 kDa &125-140 kDa polypeptide in SDS-PAGE resulting from different glycosylation.

ENDOTOXIN LEVEL: <1 EU/µg by LAL method

FORM: Lyophilized

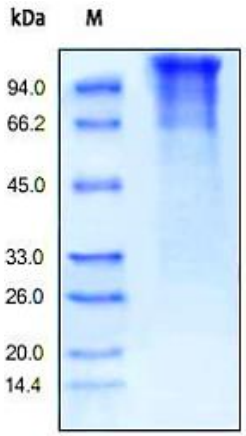
FORMULATION: Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4. Normally Mannitol or Trehalose is added as protectants before lyophilization.

STORAGE CONDITIONS: Store at -20°C. After reconstitution, aliquot and store at -20°C and use within 3 months. Avoid repeated freezing and thawing cycles.

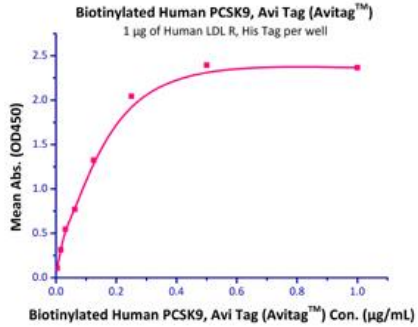
RECONSTITUTION: Centrifuge the vial prior to opening. Reconstitute in sterile PBS, pH 7.4 to a concentration of 50 µg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 month. For extended storage, it is recommended to store at -20°C.

DESCRIPTION: Low-Density Lipoprotein (LDL) Receptor, 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.

BIOLOGICAL ACTIVITY: Measured by its binding ability in a functional ELISA. Immobilized Human LDL R, His Tag at 10 µg/mL (100 µl/well) can bind Biotinylated Human PCSK9 with a linear range of 0.01-0.1 µg/ml.



Human recombinant LDLR



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RELATED PRODUCTS:

- LDLR Antibody **(Cat. No. 3839-100)**
- Lipoproteins, Human Plasma, High Density **(Cat. No. 4934-1000)**
- Lipoproteins, Human Plasma, Intermediate Density **(Cat. No. 4932-1000)**
- Lipoproteins, Human Plasma, Very Low Density **(Cat. No. 4933-1000)**
- HDL and LDL/VLDL Quantification Colorimetric/Fluorometric Kit **(Cat. No. K613-100)**

FOR RESEARCH USE ONLY! Not to be used in humans.

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