Data Sheet (Cat.No.TMPY-01014)

TargetMol

LDLR Protein, Mouse, Recombinant (His)

General Information

Synonyms:	low density lipoprotein receptor;Hlb301
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse LDLR (NP_034830.2) precursor (Met 1-Arg 790) with substitution of Val 23 and Gly 27 by Ala 23 and Cys 27 respectively was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Ala 22
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P35951
Molecular Weight:	85.7 kDa (predicted); 120-130 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized Rat PCSK9 at 10 μg/ml (100 μl/well) can bind biotinylated recombinant mouse LDLR. The EC50 of biotinylated mouse LDLR is 0.173 μg/ml.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

LDL Receptor, also known as LDLR, is a mosaic protein that belongs to the Low-density lipoprotein receptor gene family. The low-density lipoprotein receptor (LDLR) gene family consists of cell surface proteins involved in receptor-mediated endocytosis of specific ligands. LDL Receptor consists of 840 amino acids (after removal of

signal peptide) and mediates the endocytosis of cholesterol-rich LDL. Low-density lipoprotein (LDL) is normally bound at the cell membrane and taken into the cell ending up in lysosomes where the protein is degraded and the cholesterol is made available for repression of microsomal enzyme 3-hydroxy-3-methylglutaryl coenzyme A (HMG CoA) reductase, the rate-limiting step in cholesterol synthesis. At the same time, a reciprocal stimulation of cholesterol ester synthesis takes place. LDL Receptor 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.

Reference

Yamamoto T,et al.(1984) The human LDL receptor: a cysteine-rich protein with multiple Alu sequences in its mRNA. Cell. 39(1): 27-38.

Mao B,et al.(2001) LDL-receptor-related protein 6 is a receptor for Dickkopf proteins. Nature. 411(6835): 321-5.

Pinson KI,et al.(2000) An LDL-receptor-related protein mediates Wnt signalling in mice. Nature. 407(6803): 535-8.