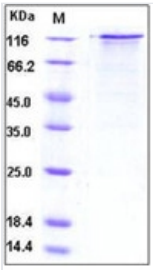
LDLR/LDL Receptor (LDLR) Active Protein

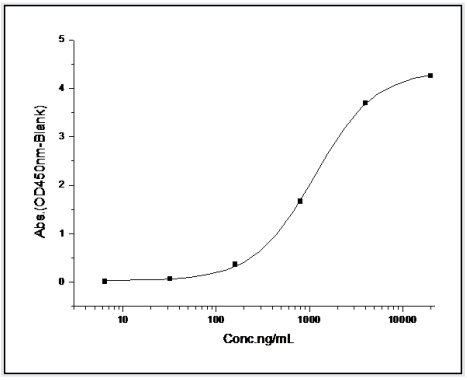
PRODUCT OVERVIEW

Product Name	LDLR/LDL Receptor, Active Protein
Full Product Name	LDLR/LDL Receptor Protein, Mouse, Recombinant (His Tag)
Product Gene Name	LDLR active protein
Product Synonym Names	Mouse LDLR/LDL Receptor Protein (His Tag); Hlb301 Protein, Mouse; low density lipoprotein receptor
Sequence	Met1-Arg79 0
Host	HEK293 Cells
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Purity/Purification	>90% as determined by SDS-PAGE
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.
Molecular Weight	95,135 Da
Chromosome Location	Chromosome: 9; NC_000075.6 (21723576..21749919). Location: 9 A3; 9 5.0 cM
3D Structure	ModBase 3D Structure for P35951
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Species	Mouse
Activity	Measured by its binding ability in a functional ELISA. Immobilized Rat PCSK9 at 10ug/ml (100uL/well) can bind biotinylated recombinant mouse LDLR. The EC50 of biotinylated mouse LDLR is 0.173ug/ml.
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Ala 22
Tag	C-His
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.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.

Related Product Information for LDLR active 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.
Product References and Citations for LDLR active protein	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.
Other Notes	Small volumes of LDLR active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for LDLR purchase	MBS8122672 is an active protein targeting LDLR. Also known as LDLR/LDL Receptor Protein, Mouse, Recombinant (His Tag). Host: HEK293 Cells.



SDS-Page of LDLR active protein



Testing Data of LDLR active protein

Measured by its binding ability in a functional ELISA. Immobilized Rat PCSK9 at 10 ug/ml (100 ul/well) can bind biotinylated recombinant mouse LDLR. The EC50 of biotinylated mouse LDLR is 0.173 ug/ml.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LDLR. It may not necessarily be applicable to this product.

NCBI GI #	113195700
NCBI GeneID	16835
NCBI Accession #	NP_034830.2
UniProt Primary Accession #	P35951
UniProt Related Accession #	P35951
GenBank Nucleotide #	NM_010700.3
NCBI Official Full Name	low-density lipoprotein receptor isoform 1
NCBI Official Synonym Full Names	low density lipoprotein receptor
NCBI Official Symbol	Ldlr
NCBI Official Synonym Symbols	Hlb301
UniProt Protein Name	Low-density lipoprotein receptor

Protein Family	Low-density lipoprotein receptor
UniProt Gene Name	Ldlr
UniProt Synonym Gene Names	LDL receptor
UniProt Entry Name	LDLR_MOUSE
NCBI Protein Information	low-density lipoprotein receptor; LDL receptor
UniProt Comments for LDLR	LDLR: 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. Defects in LDLR are the cause of familial hypercholesterolemia (FH); 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). Belongs to the LDLR family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Receptor, misc.; Cell surface; Membrane protein, integral Cellular Component: apical part of cell; basolateral plasma membrane; caveola; cell surface; coated pit; early endosome; endosome; external side of plasma membrane; Golgi apparatus; late endosome; lysosome; membrane; plasma membrane; receptor complex; recycling endosome membrane Molecular Function: glycoprotein binding; identical protein binding; low-density lipoprotein binding; low-density lipoprotein receptor activity; protease binding; protein binding; very-low-density lipoprotein receptor activity Biological Process: cholesterol absorption; cholesterol homeostasis; cholesterol metabolic process; cholesterol transport; endocytosis; lipid metabolic process; lipoprotein catabolic process; lipoprotein metabolic process; phospholipid transport; positive regulation of inflammatory response
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