VLDLR Protein, Mouse (HEK293, His)

Cat. No.:	HY-P78049
Synonyms:	VLDL-R; VLDLR; RP11-320E16.1; CHRMQ1; FLJ35024; VLDLRCH
Species:	Mouse
Source:	HEK293
Accession:	P98156 (G28-S797)
Gene ID:	22359
Molecular Weight:	110-130 kDa

PROPERTIES

AA Sequence

G K K A K C D S S Q F Q C T N G R C I T L L W K C D G D E D C A D G S D E K N C
V K K T C A E S D F V C K N G Q C V P N R W Q C D G D P D C E D G S D E S P E Q
C H M R T C R I N E I S C G A R S T Q C I P V S W R C D G E N D C D N G E D E E
N C G N I T C S A D E F T C S S G R C V S R N F V C N G Q D D C D D G S D E L D
C A P P T C G A H E F Q C S T S S C I P L S W V C D D D A D C S D Q S D E S L E
Q C G R Q P V I H T K C P T S E I Q C G S G E C I H K K W R C D G D P D C K D G
S D E V N C P S R T C R P D Q F E C E D G S C I H G S R Q C N G I R D C V D G S
D E V N C K N V N Q C L G P G K F K C R S G E C I D M S K V C D Q E Q D C R D W
S D E P L K E C H I N E C L V N N G G C S H I C K D L V I G Y E C D C A A G F E
L I D R K T C G D I D E C Q N P G I C S Q I C I N L K G G Y K C E C S R G Y Q M
D L A T G V C K A V G K E P S L I F T N R R D I R K I G L E R K E Y I Q L V E Q
L R N T V A L D A D I A A Q K L F W A D L S Q K A I F S A S I D D K V G R H F K
M I D N V Y N P A A I A V D W V Y K T I Y W T D A A S K T I S V A T L D G A K R
K F L F N S D L R E P A S I A V D P L S G F V Y W S D W G E P A K I E K A G M N
G F D R R P L V T E D I Q W P N G I T L D L V K S R L Y W L D S K L H M L S S V
D L N G Q D R R I V L K S L E F L A H P L A L T I F E D R V Y W I D G E N E A V
Y G A N K F T G S E L A T L V N N L N D A Q D I I V Y H E L V Q P S G K N W C E
D D M E N G G C E Y L C L P A P Q I N D H S P K Y T C S C P N G Y N L E E N G R
E C Q S T S T P V T Y S E T K D I N T T D I L R T S G L V P G G I N V T T A V S
E V S V P P K G T S

Biological Activity	Mouse VLDLR, His Tag immobilized on CM5 Chip can bind Mouse PCSK9, His Tag with an affinity constant of 0.28 nM as determined in SPR assay (Biacore T200).
Appearance	Lyophilized powder.
Formulation	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.

Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The VLDLR protein operates as a multifunctional cell surface receptor pivotal in energy metabolism, particularly by binding VLDL and facilitating its cellular uptake through endocytosis. Beyond its role in lipid transport, VLDLR exhibits a broad binding affinity for various molecules, including Reelin/RELN, apolipoprotein E/APOE-containing ligands, and clusterin/CLU. In the inactive state of the pathway, VLDLR forms homo or heterooligomers with LRP8. Upon ligand binding, these homooligomers rearrange into higher-order receptor clusters, transducing the extracellular RELN signal to intracellular signaling processes through DAB1 binding on its cytoplasmic tail. This interaction triggers DAB1 phosphorylation, orchestrating the cell responses crucial for the correct positioning of newly generated neurons. Additionally, VLDLR serves as a stop signal for migrating neurons, preventing entry into the marginal zone. Interactions with various proteins, including LDLRAP1, SNX17, PCSK9, PAFAH1B3, PAFAH1B2, STX5, and CLU, further highlight the intricate regulatory network of VLDLR in cellular processes.

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