VLDLR Protein, Human (HEK293, His)

Cat. No.:	HY-P76125
Synonyms:	Very low-density lipoprotein receptor; VLDL-R
Species:	Human
Source:	HEK293
Accession:	P98155 (G28--S797)
Gene ID:	7436
Molecular Weight:	110-130 kDa (glycosylation)

PROPERTIES

AA Sequence	G R K A K C E P S Q F Q C T N G R C I T L L W K C D G D E D C V D G S D E K N C V K K T C A E S D F V C N N G Q C V P S R W K 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 H E I S C G A H S T Q C I P V S W R C D G E N D C D S G E D E E N C G N I T C S P D E F T C S S G R C I S R N F V C N G Q D D C S 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 I 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 A 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 I S K V C N 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 V 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 T 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 A D I Q W P N G I T L D L I 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 E 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 S G Y N V E E N G R D C Q S T A T T V T Y S E T K D T N T T E I S A 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	Human VLDLR, His Tag immobilized on CM5 Chip can bind Human PCSK9, His Tag with an affinity constant of ≤0.72 nM as determined in SPR assay (Biacore T200).
Appearance	Lyophilized powder
Formulation	Lyophilized from 0.22μm 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.
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	VLDLR protein, a multifunctional cell surface receptor, plays a pivotal role in energy metabolism by binding to VLDL and facilitating its endocytic transport into cells. Beyond lipid transport, VLDLR exhibits versatile binding capabilities, interacting with a diverse array of molecules, including Reelin/RELN, apolipoprotein E/APOE-containing ligands, and clusterin/CLU. In its inactive state, VLDLR forms homooligomers or heterooligomers with LRP8. Upon ligand binding, homooligomers undergo rearrangement into higher order receptor clusters that transmit the extracellular RELN signal to intracellular signaling pathways by binding to DAB1. This interaction triggers the phosphorylation of DAB1, orchestrating the cellular responses necessary for the accurate positioning of newly generated neurons. Subsequently, VLDLR acts as a stop signal for migrating neurons, preventing their entry into the marginal zone. Notably, in the context of microbial infection, VLDLR serves as a receptor for Semliki Forest virus.

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