Human VLDLR / VLDL Receptor Protein (His Tag)

Catalog Number: **11075-H08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CAMRQ1; CARMQ1; CHRMQ1; VLDLRCH

Protein Construction:

A DNA sequence encoding the human VLDLR isoform alpha (NP_003374.3) extracellular domain (Met 1-Ser 797) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 80 % as determined by SDS-PAGE

Bio Activity:

1.Measured by its binding ability in a functional ELISA.
2.Immobilized human VLDLR-His (Cat:11075-H08H) at 10μg/mL (100μL/well) can bind biotinylated human LRPAP1-His (Cat:11100-H08H), the EC_{50} of biotinylated human LRPAP1-His is 0.05-0.2 μg/mL.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gly 28

Molecular Mass:

The recombinant human VLDLR comprises 781 amino acids with a predicted molecular mass of 86 kDa. It migrates with the apparent molecular weight of 150 & 180 kDa due to different glycosylation in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

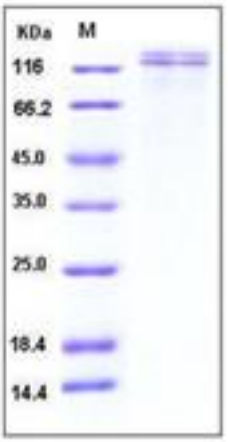
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The very low density lipoprotein receptor, known as VLDLR, is a single-pass type 1 integral membrance protein and a member of the LDL receptor family. This receptor family includes LDL receptor, LRP, megalin, VLDLR and ApoER2, and is characterized by a cluster of cysteine-rich class A repeats, epidermal growth factor (EGF)-like repeats, YWTD repeats and an O-linked sugar domain. VLDLR contains 3 EGF-like domains, 8 LDL-receptor class A domains, as well as 6 LDL-receptor class B repeats, and is abundant in heart, skeletal muscle, also ovary and kidney, but not in liver. VLDLR binds VLDL and transports it into cells by endocytosis. In order to be internalized, the receptor-ligand complexes must first cluster into clathrin-coated pits. VLDLR mediates the phosphorylation of mDab1 (mammalian disabled protein) via binding to Reelin, and induces the modulation of Tau phosphorylation. This pathway regulates the migration of neurons along the radial glial fiber network during brain development. Defects of VLDLR may be the cause of VLDLR-associated cerebellar hypoplasia (VLDLRCH), a syndrome characterized by moderate-to-profound mental retardation, delayed ambulation, and predominantly truncal ataxia.

References

1.Trommsdorff, M. et al., 1999. Cell. 97: 689-701.
2.Mikhailenko, I. et al., 1999. J. Cell Sci. 112: 3269-3281.
3.Sato, A. et al., 1999. Biochem. J. 341: 377-383.