## Recombinant Human VLDLR/VLDL Receptor Protein (His Tag)

## Catalog Number: PKSH031275

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description	
Species	Human
Source	HEK293 Cells-derived Human VLDLR/VLDL Receptor protein Met 1-Ser 797, with an
	C-terminal His
Calculated MW	86.0 kDa
Observed MW	150 & 180 kDa
Accession	NP_003374.3
Bio-activity	Immobilized human VLDLR-His at $10\mu g/mL$ ( $100\mu L/well$ ) can bind biotinylated
	human LRPAP1-His, the EC <sub>50</sub> of biotinylated human LRPAP1-His is 0.05-0.2 $\mu$ g/mL.
Properties	
Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80
	°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of
	reconstituted samples are stable at $< -20^{\circ}$ C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4
	Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants
	before lyophilization.
	Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.
Data	
	KDa MK R
1	116 ====
6	56.2
4	45.0
3	35.0

> 95 % as determined by reducing SDS-PAGE.

25.0

18.4 14.4

Background

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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.