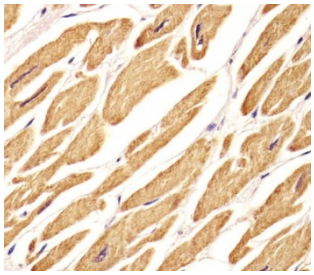
VLDL Receptor Antibody / VLDLR (F54296)

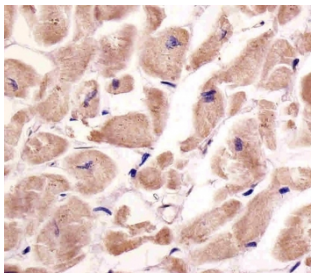
Catalog No.	Formulation	Size
F54296-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54296-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

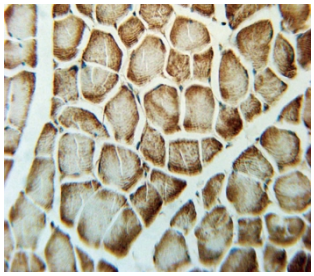
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P98155
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry (FFPE) : 1:25 Flow Cytometry : 1:25/million cells
Limitations	This VLDL Receptor antibody is available for research use only.



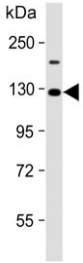
Immunohistochemistry of VLDL Receptor / VLDLR in human heart tissue. Formalin-fixed, paraffin-embedded human heart tissue stained with VLDL Receptor antibody shows strong cytoplasmic staining in cardiomyocytes, with signal distributed throughout myocardial fibers, while nuclei and surrounding interstitial areas show minimal staining. Antigen retrieval was performed by steaming tissue sections in citrate buffer, pH 6.0, for 20 minutes, followed by cooling prior to immunostaining.



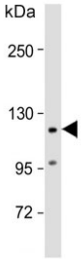
IHC testing of FFPE human heart tissue with VLDL Receptor antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



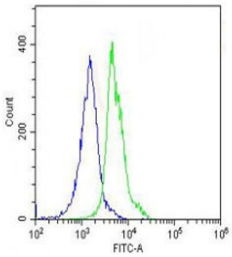
IHC testing of FFPE human skeletal muscle tissue with VLDL Receptor antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



Western blot testing of human 293T cell lysate with VLDL Receptor antibody. Expected molecular weight: 96-160 kDa depending on glycosylation level.



Western blot testing of human heart lysate with VLDL Receptor antibody. Expected molecular weight: 96-160 kDa depending on glycosylation level.



Flow cytometry testing of fixed and permeabilized human ThP-1 cells with VLDL Receptor antibody; Blue=isotype control, Green= VLDL Receptor antibody.

Description

VLDL Receptor / VLDLR antibody recognizes the very low density lipoprotein receptor, a member of the low density lipoprotein receptor family that mediates uptake of triglyceride rich lipoproteins and participates in cell signaling pathways. VLDLR is a type I transmembrane glycoprotein characterized by ligand binding repeats, epidermal growth factor like domains, and a cytoplasmic tail that supports endocytosis and intracellular trafficking. Unlike the classical LDL receptor, VLDLR is not primarily regulated by intracellular cholesterol levels and instead serves tissue specific roles in lipid handling and signaling.

Very low density lipoprotein receptor is highly expressed in tissues with active lipid metabolism and structural remodeling, including heart, skeletal muscle, adipose tissue, and brain. In these contexts, VLDLR contributes to uptake of apolipoprotein E containing lipoproteins and supports local lipid utilization. The receptor is also widely studied in the nervous system, where VLDLR participates in Reelin signaling, a pathway essential for neuronal migration, cortical layering, and synaptic organization during development and in adult brain function.

VLDLR is sometimes referred to by its gene symbol VLDLR and has also been historically associated with related receptor nomenclature within the LDL receptor family. Through its interaction with extracellular ligands and adaptor

proteins, VLDLR links lipid metabolism to intracellular signaling cascades that influence cell positioning, differentiation, and survival. Because of this dual role, VLDL receptor biology spans cardiovascular research, neurobiology, and metabolic disease studies.

Altered expression or function of VLDLR has been examined in a range of pathological contexts, including atherosclerosis, cardiomyopathy, neurodevelopmental disorders, and cancer associated metabolic remodeling. In research settings, detection of VLDLR expression provides insight into lipid uptake pathways and Reelin dependent signaling mechanisms. Use of a VLDL Receptor antibody supports investigation of these processes in both tissue and cell based experimental models.

VLDL Receptor antibody is designed to detect VLDLR in research applications. Evaluation of receptor expression and localization enables assessment of lipoprotein receptor distribution and pathway engagement in diverse biological systems. Overall, very low density lipoprotein receptor remains an important molecule for studying lipid metabolism, neuronal signaling, and tissue specific regulatory mechanisms.

Application Notes

The stated application concentrations are suggested starting points. Titration of the VLDL Receptor antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 484-510 from the human protein were used as the immunogen for the VLDL Receptor antibody.

Storage

Aliquot the VLDL Receptor antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Copyright © NSJ Bioreagents. All rights reserved.