

Lipoproteins, Very Low Density, Human Plasma

Cat # LIPV19-N

Lipoproteins, Very Low Density, Human Plasma

Size: 1 mg

Very-low-density lipoprotein (VLDL) is a type of lipoprotein made by the liver. VLDL is one of the five major groups of lipoproteins (chylomicrons, VLDL, intermediate-density lipoprotein, low-density lipoprotein, high-density lipoprotein) that enable fats and cholesterol to move within the water-based solution of the bloodstream. VLDL is assembled in the liver from cholesterol and apolipoproteins. VLDL is converted in the bloodstream to low-density lipoprotein (LDL). VLDL particles have a diameter of 30-80 nm. VLDL transports endogenous products, whereas chylomicrons transport exogenous (dietary) products. VLDL transports endogenous triglycerides, phospholipids, cholesterol, and cholesteryl esters. It functions as the body's internal transport mechanism for lipids.

Nascent VLDL circulates in blood and picks up apolipoprotein C-II and apolipoprotein E donated from high-density lipoprotein (HDL). At this point, nascent VLDL becomes a mature VLDL. Once in circulation, VLDL will come in contact with lipoprotein lipase in the capillary beds in the body (adipose, cardiac, and skeletal muscle). LPL will remove triglycerides from VLDL for storage or energy production. VLDL now meets back up with HDL where apoC-II is transferred back to HDL (but keeps apoE). HDL also transfers cholesteryl esters to the VLDL in exchange for phospholipids and triglycerides via cholesteryl ester transfer protein. As more and more triglycerides are removed from the VLDL because of the action of LPL enzyme, the composition of the molecule changes, and it becomes intermediate-density lipoprotein.

Fifty percent of IDLs are recognized by receptors in the liver cells because of the apoB-100 and apoE they contain and are endocytosed. The other 50% of IDL lose apoE. When their cholesterol content becomes greater than the content of triglyceride, they become LDL, with apoB-100 as the primary apolipoprotein. The LDL is taken into a cell via the LDL receptor via endocytosis, where the contents are either stored, used for cell membrane structure, or converted into other products such as steroid hormones or bile acids.

Source and Form:

Cat # LIPV19-N, Lipoproteins, Very Low Density, is prepared from fresh, non-frozen plasma shown to be non reactive for HbsAG, anti-HCV, anti-HBc, and negative for anti-HIV 1 & 2 by FDA approved tests. Purified protein (mol wt 10-80 kda) displayed single arc by IEP against antisera to whole human serum. Essentially free of other plasma lipoproteins as determined by electrophoresis using Fat Red 7B stain for lipids and Coomassie Blue for proteins. Lipoprotein is typically 85%lipid and ~15% protein. Therefore, 1 mg LIPV19-N contains approx 15% protein and 85% lipids.

It is supplied in PBS, pH 7.5 and 0.001% EDTA. A suitable anti-bacteriostatic agent can be added if required (0.1% azide or 0.02% thimerosal). Store at 2-4oC and do not freeze.

Suggested Applications:

Antigen in ELISA and Western blots

All items are for in vitro research use only.

Related items

Catalog#	ProdDescription	
Rabbit-Poly	APOA11-S	Anti-Human Plasma
Apolipoprotein A-I protein antiserum		
Rabbit-Poly	APOA12-A	Anti-Human
Apolipoprotein A-I protein IgG, aff pure		
Rabbit-Poly	APOA13-A	Anti-Mouse
Apolipoprotein A-I protein IgG, aff pure		
	APOA15-N-100	Apolipoprotein A-I, Human Plasma,
HDL		
Goat-Poly	APOA21-A	Anti-Human Apolipoprotein A-II
protein IgG, aff pure		
	APOA25-N-100	Apolipoprotein A-II, Human Plasma,
HDL		
	APOA45-N-100	Apolipoprotein A-IV, Human
Plasma, HDL		
Goat-Poly	APOB21-A	Ant-Human Apolipoprotein B IgG,
aff pure		
	APOB21-C	Human Apolipoprotein B protein
control for WB		
	APOB25-N-100	Apolipoprotein B, Human Plasma,
LDL		
Rabbit-Poly	APOC11-A	Anti-Human
Apolipoprotein C-I IgG, aff pure		
	APOC15-N-100	Human Apolipoprotein C-I protein
control for WB		
	APOC15-N-100	Apolipoprotein C-I, Human Plasma,
VLDL		
Rabbit-Poly	APOC21-S	Anti-Human Plasma
Apolipoprotein C-II antiserum		
Rabbit-Poly	APOC22-A	Anti-Human
Apolipoprotein C-II IgG, aff pure		
	APOC25-N-50	Apolipoprotein C-II, Human Plasma,
VLDL		
Rabbit-Poly	APOC32-A	Anti-Human
Apolipoprotein C-III IgG, aff pure		
	APOC35-N-50	Apolipoprotein C-III, Human
Plasma, VLDL		
Goat-Poly	APOE11-S	Anti-Human ApoE protein antiserum
#1		
Mouse-Mono	APOE12-M	Monoclonal Anti-Human
ApoE protein IgG #2		
Rabbit-Poly	APOE13-A	Anti-Human Plasma
Apolipoprotein E (ApoE) IgG, aff pure		
	APOE15-R	Human Purified native plasma
Apolipoprotein E protein		
	APOE25-R	Recombinant Purified Human
Apolipoprotein E2 protein		
Rabbit-Poly	APOE31-S	Anti-Human ApoE3
	APOE35-R	Recombinant Purified Human
Apolipoprotein E3 protein		
	APOE36-R	Recombinant (E coli) Purified
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