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HDL Human

High Density Lipoprotein Human
RCP1004

Product Overview

Name	HDL Human

Description

High Density Lipoprotein Human

Synonyms

High Density Lipoprotein, HDL.

Introduction

HDL is a complex of lipids and proteins in approximately equal amounts that functions as a transporter of cholesterol in the blood. HDL is the smallest of the lipoprotein particles; it's the densest because it contains the highest proportion of protein. The liver synthesizes these lipoproteins as complexes of apolipoproteins and phospholipid, which bear a resemblance to cholesterol-free flattened spherical lipoprotein particles. They pick up cholesterol; carry it internally, from cells by interaction with the ATP Binding Cassette Transporter A1. Lecithin-cholesterol acyltransferase (plasma enzyme) converts the free cholesterol into cholesteryl ester (a more hydrophobic form of cholesterol) which is then sequestered into the core of the lipoprotein particle ultimately making the newly synthesized HDL spherical. They increase in size as they pass through the bloodstream and integrate more cholesterol and phospholipid molecules from cells and other lipoproteins, for instance by the interaction with the ABCG1 transporter and the phospholipid transport protein. HDL transports their cholesterol generally to the liver or steroidogenic organs such as adrenals, ovary and testes by direct and indirect pathways. The release of HDL cholesterol to adrenals, ovaries and testes is important for the synthesis of steroid hormones. Since the triglycerides are not stable in HDL, they're degraded by hepatic lipase in order that finally small HDL particles are left which resume the uptake of cholesterol from cells. The cholesterol supplied to the liver is excreted into the bile and consequently intestine either directly or indirectly after conversion into bile acids. High levels of HDL are associated with a decreased risk of atherosclerosis and coronary heart disease.

Source

Human plasma.

Physical Appearance

Yellow to orange liquid.

Stability

Human HDL although stable at 4°C for 1 week, should be stored below -15°C (short term i.e. < 3 months) and below

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-70°C for long term.

Purity