

Product datasheet

Oxidized HDL Assay Kit (CML-HDL, Human) ab242309

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Overview

Product name	Oxidized HDL Assay Kit (CML-HDL, Human)
Detection method	Colorimetric
Sample type	Serum, Plasma
Species reactivity	Reacts with: Human
Product overview	<p>Oxidized HDL Assay Kit (CML-HDL, Human) (ab242309) is an enzyme immunoassay developed for the detection and quantitation of human OxHDL in plasma or serum samples.</p> <p>The kit contains a CML-HDL standard and has a detection sensitivity limit of <1 ng/mL. Each kit provides sufficient reagents to perform up to 96 assays including standard curve and unknown samples.</p>
Tested applications	Suitable for: ELISA
Platform	Microplate

Properties

Storage instructions Please refer to protocols.

Components	1 x 96 tests
10X Wash Buffer	1 x 100ml
5X Wash Solution	1 x 1.2ml
Anti-CML Antibody Coated Plate	1 unit
Assay Diluent	1 x 50ml
Biotinylated Anti-Human ApoAI Antibody (1000X)	1 x 20µl
Blocking Reagent (100X)	1 x 200µl

Components	1 x 96 tests
Buffer Solution	1 x 5ml
CML-HDL Standard	1 x 20µl
Precipitation Solution 1	1 x 250µl
Precipitation Solution 2	1 x 2.5ml
Precipitation Solution 3	1 x 650µl
Stop Solution	1 x 12ml
Streptavidin-Enzyme Conjugate	1 x 20µl
Substrate Solution	1 x 12ml

Relevance

Lipoproteins are submicroscopic particles composed of lipid and protein held together by noncovalent forces. Their general structure is that of a putative spheroidal microemulsion formed from an outer layer of phospholipids, unesterified cholesterol, and proteins, with a core of neutral lipids, predominately cholesteryl esters and triacylglycerols (TAG). Low density lipoprotein (LDL) is the major transport protein for cholesterol in human plasma. LDL is a spherical particle with a diameter of 20-25 nm. Each LDL particle contains cholesteryl esters in its core which are surrounded by a hydrophilic coat composed of phospholipids, cholesterol, and one molecule of a hydrophobic protein known as apolipoprotein B-100. LDL cholesterol, sometimes referred to as “bad” cholesterol, is even more dangerous when it becomes oxidized. Oxidized LDL (OxLDL) is more reactive with surrounding tissues and can collect within the inner-lining of arteries. Macrophages, cholesterol, and other lipids can accumulate at the site (atherosclerosis), ultimately forming a plaque that can lead to heart attack, stroke or death. LDL oxidation affects both the protein and phospholipids of LDL. Reactive aldehyde products formed during the oxidation of polyunsaturated fatty acids, such as malondialdehyde (MDA) and 4-hydroxynonenal (HNE), are capable of attaching covalently to the ε-amino groups of lysine residues of ApoB-100 to form MDA-Lys and HNE-Lys adducts (MDA-LDL and HNE-LDL). Advanced glycosylation, such as the formation of CML-LDL and CEL-LDL, are also involved in LDL oxidation.

Applications

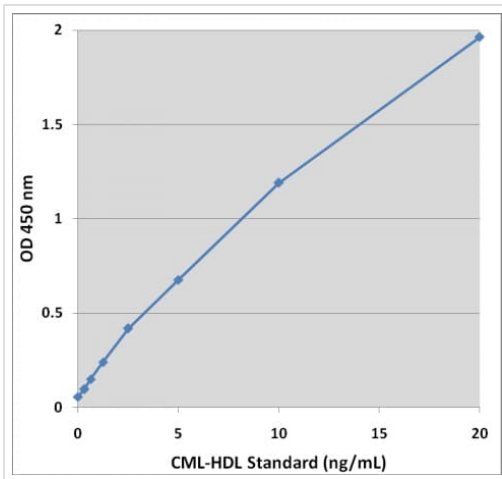
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Our **Abpromise guarantee** covers the use of ab242309 in the following tested applications.

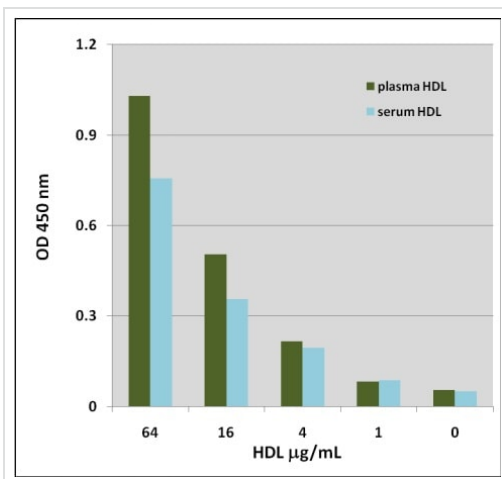
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISA		Use at an assay dependent concentration.

Images



Human CML-HDL Standard Curve



CML-HDL Determination of Serum and Plasma Samples.

HDL from human serum and plasma samples was isolated according to the Sample Preparation Section. Samples were diluted from 5 mg/mL to 64 $\mu\text{g/mL}$ in Assay Diluent, and then fourfold serial dilutions were prepared. Samples were tested according to the Assay Protocol.

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