

Product datasheet

Cholesterol/ Cholesteryl Ester Assay Kit - Quantitation ab65359

★★★★★ [2 Abreviews](#) [160 References](#) [4 Images](#)

Overview

Product name	Cholesterol/ Cholesteryl Ester Assay Kit - Quantitation
Detection method	Colorimetric/Fluorometric
Sample type	Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids, Tissue Extracts
Assay type	Quantitative
Assay time	1h 00m
Product overview	Cholesterol/ Cholesteryl Ester Assay Kit ab65359 provides a simple method for sensitive quantification of total cholesterol, free cholesterol, and cholesteryl esters, by colorimetric or fluorometric methods.

The majority of cholesterol in blood is in the form of cholesteryl esters. In the cholesterol assay protocol, these are hydrolyzed to cholesterol by cholesterol esterase. Cholesterol is then oxidized by cholesterol oxidase to yield H₂O₂ which reacts with a sensitive cholesterol probe to produce color ($\lambda_{max} = 570 \text{ nm}$) and fluorescence (Ex/Em = 535/587 nm).

The assay detects total cholesterol (cholesterol and cholesteryl esters) when cholesterol esterase is included in the reaction, or free cholesterol when it is not included. The amount of cholesteryl ester can be determined by subtracting the value of free cholesterol from the total (cholesterol plus cholesteryl esters).

Cholesterol assay protocol summary:

- add samples and standards to wells
- add total cholesterol reaction mix (with esterase) or free cholesterol reaction mix (without esterase) and incubate for 60 min at 37°C
- analyze with microplate reader

Notes This product is manufactured by BioVision, an Abcam company and was previously called K603 Total Cholesterol and Cholesteryl Ester Colorimetric/Fluorometric Assay Kit. K603-100 is the same size as the 100 test size of ab65359.

Other cholesterol assay kits include:

- **[HDL and LDL/VLDL Cholesterol assay kit ab65390](#)**
- **[Cell-based Cholesterol assay kit ab133116](#)**
- **[Cholesterol Efflux assay kit ab196985](#)**

- Cholesterol Uptake assay kit ab236212

Review our [Metabolism Assay Guide](#) to learn about assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress, and also about how to assay metabolic function in live cells using your plate reader.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Platform

Microplate reader

Properties

Storage instructions

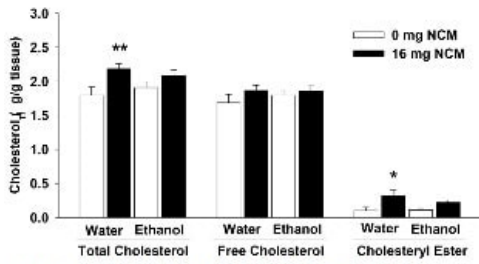
Store at -20°C. Please refer to protocols.

Components	100 tests	2000 tests
Assay Buffer II	1 x 25ml	20 x 25ml
Cholesterol Esterase	1 vial	20 vials
Cholesterol Standard	1 x 100µl	20 x 100µl
Enzyme Mix I	1 vial	20 vials
OxiRed Probe	1 x 200µl	20 x 200µl

Relevance

Cholesterol is an essential molecule in all animal life. It is involved in both normal development and diseases. A high level of serum cholesterol is an indicator for diseases such as heart disease. Cholesteryl ester is an ester of cholesterol. The ester bond is formed between the carboxylate group of a fatty acid and the hydroxyl group of cholesterol.

Images



Mailloux RJ, Florian M, Chen Q, Yan J, Petrov I, Coughlan MC, et al. PLoS ONE 9(9): e106832. (2014)

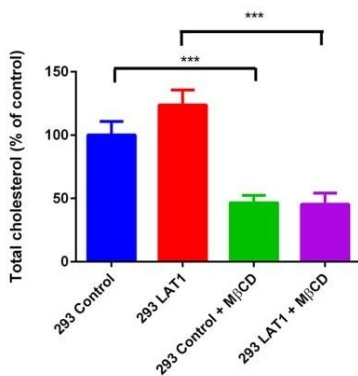
Functional Studies - Cholesterol/ Cholesteryl Ester

Assay Kit - Quantitation (ab65359)

Mailloux RJ, Florian M, Chen Q, Yan J, Petrov I, Coughlan MC, et al., PLoS ONE 9(9): e106832., Fig 3, doi.org/10.1371/journal.pone.0106832

Assessment of free and total cholesterol and cholesteryl ester levels using ab65359. Protein levels of geranylgeranyldiphosphate synthase were measured by ELISA. Absolute amounts of CoQ10 were measured by HPLC as described in Materials and Methods. Cholesterol levels were quantified using a Cholesterol/Cholesteryl Ester Detection Kit from Abcam according to instruction. n=?6, means ±SEM. Two-way ANOVA with Tukey's post-hoc test. *

denotes statistical comparison between vehicle control (V) and high dose (H) and # denotes statistical comparison between water and ethanol treated groups. * and **, indicate significant difference at p<0.05, 0.01 and 0.0001, respectively. OWV; obese water vehicle, OWH; obese water high dose, OEV; obese ethanol vehicle, OEH; obese ethanol high dose.



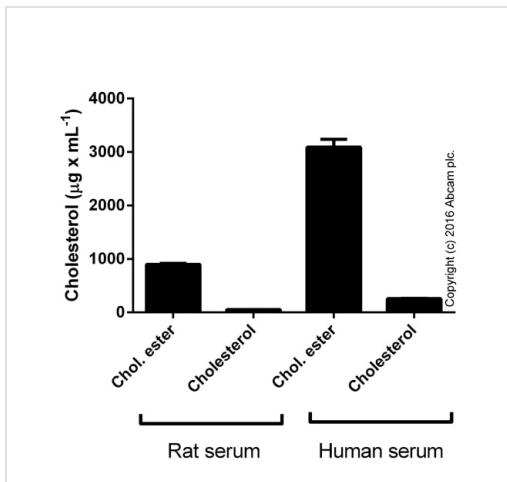
Singh, Natesh and Gerhard F Ecker. International journal of molecular sciences vol. 19,5 1278. (2018)

Functional Studies - Cholesterol/ Cholesteryl Ester

Assay Kit - Quantitation (ab65359)

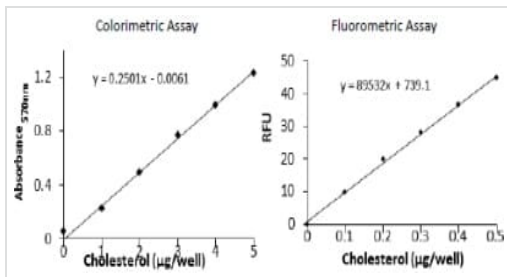
Singh, Natesh and Gerhard F Ecker., International journal of molecular sciences vol. 19,5 1278., Fig 1, doi:10.3390/ijms19051278

Total cholesterol (free and ester forms) were determined with a cholesterol quantification assay (fluorometric detection) (ab65359) and are shown relative to untreated control cells.



Cholesterol and cholesteryl ester were quantified colourimetrically in biological fluids (dilution range 1:10-1:100; 50 minutes incubation) and measured in duplicates (+/- SD).

ab65359 Cholesterol/Cholesteryl Ester Quantitation Kit



Detection of Cholesterol/Cholesteryl Ester Using Cholesterol Quantitation Kit (ab65359). Cholesterol/Cholesteryl Ester was quantified using the kit by colorimetric (A) and fluorometric (B) methods according to the kit instructions. Background from the control reaction (without cholesterol) has been subtracted from each value. Note: Fluorometric assay is over 10 fold more sensitive than colorimetric assay.

Functional Studies - Cholesterol/Cholesteryl Ester Quantitation Kit (ab65359)

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