

Metabolism Assay Kits for Blood Lipids Measurement



Lipids and disease

Lipids are an important component of the body and play an important role in maintaining the physiological functions of organs and cells. Abnormal lipids can cause comprehensive diseases of metabolic disorders, involving many organs and tissues of the body, among which atherosclerotic cardio-cerebrovascular diseases are the most serious and common.

Blood lipids are general term for lipid substances in the blood. Routine monitoring of blood lipids is of great significance to prevent or delay the occurrence and development of related diseases and to evaluate the therapeutic effect.

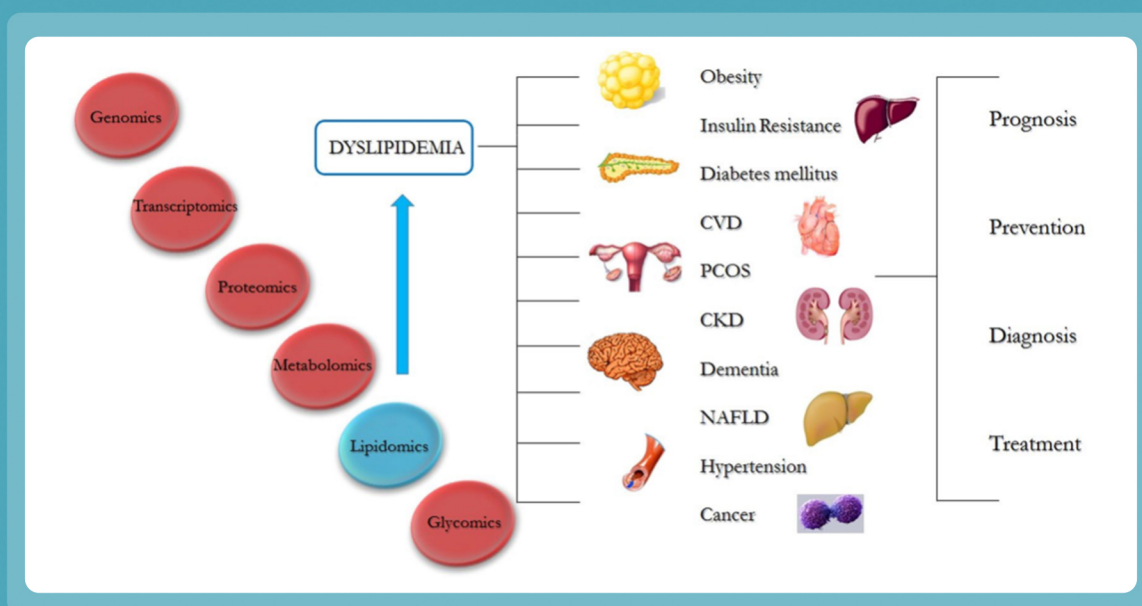


Fig1: Application of lipidomics in the management of various diseases

Blood lipids measurement indices

Commonly known blood lipids are triglyceride (TG), total cholesterol (TC), low density lipoprotein cholesterol (LDL-C), and high density lipoprotein cholesterol (HDL-C).

The main physiological function of TG is to provide energy for cell metabolism, but high TG is one of the important factors contributing to the occurrence of cardiovascular diseases and metabolic syndrome. TC plays a role in maintaining the normal structure and function of biomembrane, including free cholesterol and cholesterol ester. HDL-C and LDL-C are the main components of free cholesterol. High concentrations of TC and LDL-C are one of the risk factors that promote the occurrence of cardiovascular disease, while high levels of HDL-C reduce the risk of disease. Therefore, the determination of the concentration of the blood lipids is conducive to the prevention of related diseases, treatment effect evaluation.

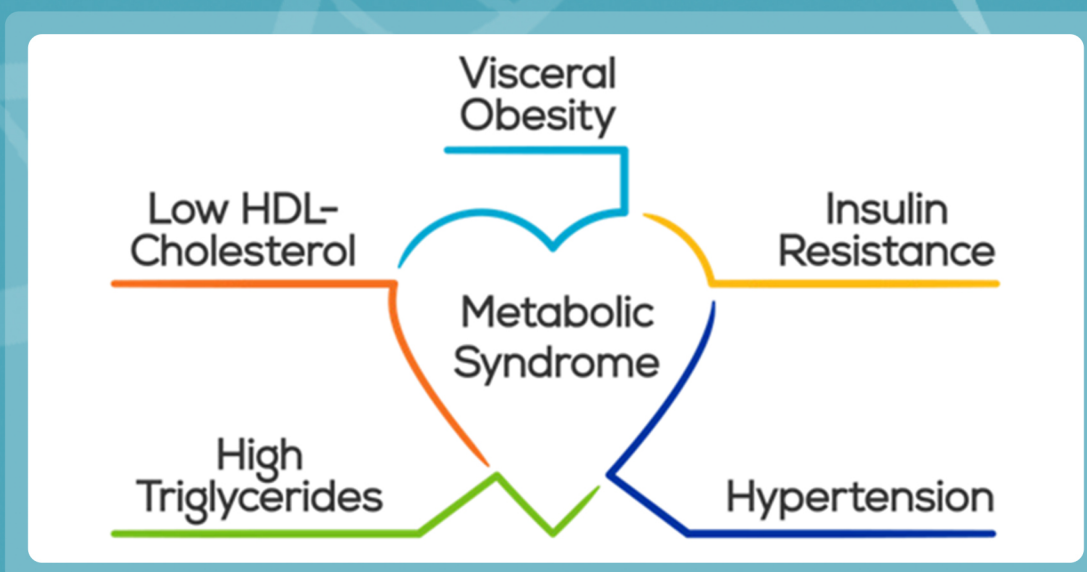


Fig2: Blood lipids and metabolic syndrome

The common methods of detection of blood lipids are chemical method, enzymatic method and chromatography method. Their advantages and disadvantages are as follows. Enzymatic method is most commonly used for its outstanding advantages.

Method	Advantages	Disadvantages
Chemical method	Low cost	Easy to interfere with many factors, Slow detection speed
Enzymatic method	High specificity, Convenience and fast to detection, Easy to automate	High cost, Poor stability
Chromatography method	High specificity	High cost, Complicated sample processing

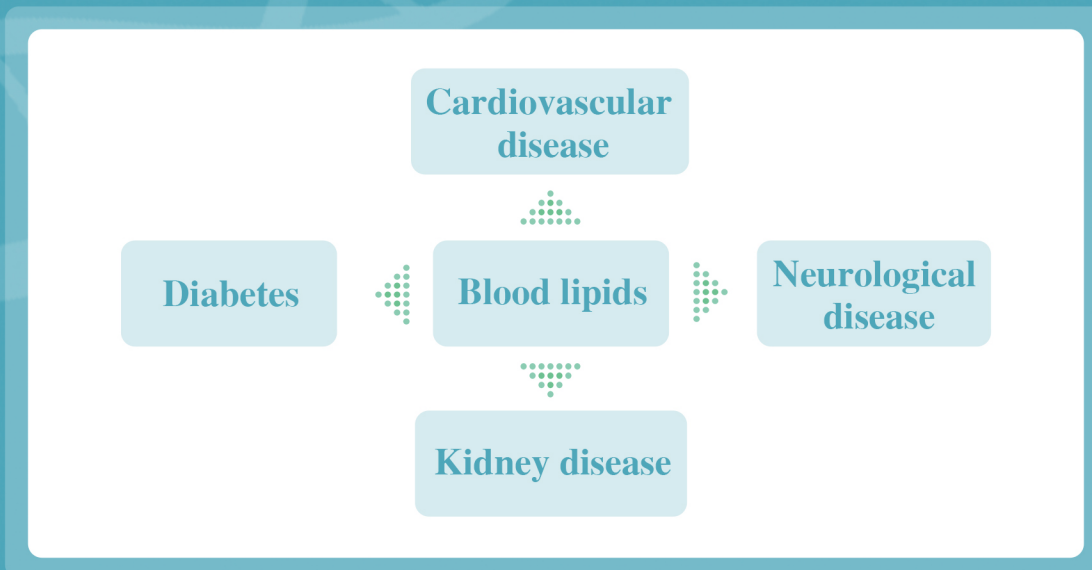
Common problems in blood lipids detection

- ✓ 1. Lower readings in samples
- ✓ 2. The sample volume to be tested is too small to measure 4 biomarker at the same time

In order to meet the needs of scientific research, Elabscience team developed four kits for measuring blood lipids based on enzymatic method with the characteristics of small sample volume and good accuracy, to help researchers get mass effective and reliable results in a short period of time.

Product Introduction

- ✓ 1. Application field: diagnosis of diseases and evaluation of related drugs



- ✓ 2. Product Features

① The sample volume is small, only 10 μL to detect the four marker

Marker	TG	TC	HDL-C	LDL-C	Total
Sample volume (μL)	2.5	2.5	2.5	2.5	10 μL

- ② The detection time is short, each indicators detection reaction only needs 10 min, and the enzyme plate instrument detection, suitable for large quantities of detection
- ③ High specificity, the use of enzyme specificity to make the results more accurate

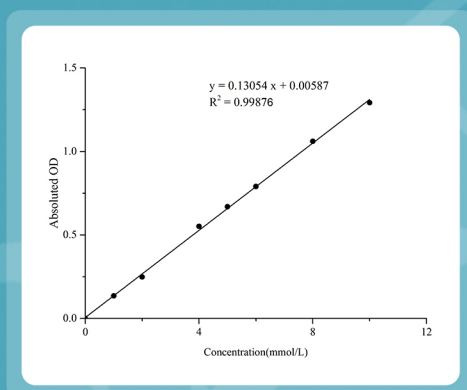
Product performance

E-BC-K261-M -Triglyceride (TG) Colorimetric Assay Kit

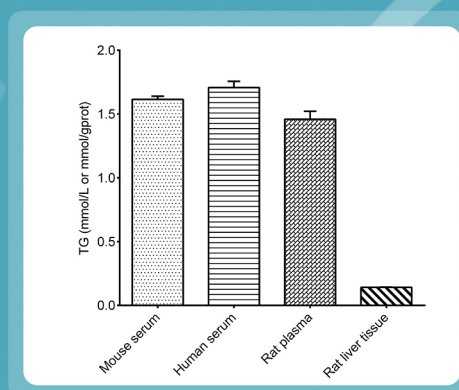
✓ Technical Parameter

Detection range	0.14-10 mmol/L	Average Inter-CV	9.2%
Sensitivity	0.14 mmol/L	Average Intra-CV	4.1%
Average recovery rate	105%		

✓ Standard Curve



✓ Analysis of Examples



Related products

Method	Item No	Product name	Experimental instrument
TG	E-BC-K261-M	Triglyceride (TG) Colorimetric Assay Kit (Single reagent, GPO-PAP method)	Microplate reader
	E-BC-K261-S		Spectrophotometry
TC	E-BC-K109-M	Total Cholesterol (TC) Colorimetric Assay Kit (Single reagent, COD-PAP method)	Microplate reader
	E-BC-K109-S		Spectrophotometry
HDL-C	E-BC-K221-M	High-density Lipoprotein Cholesterol (HDL-C) Colorimetric Assay Kit (Double reagents)	Microplate reader
	E-BC-K222-S		Spectrophotometry
LDL-C	E-BC-K205-M	Low-density Lipoprotein Cholesterol (LDL-C) Colorimetric Assay Kit (Double reagents)	Microplate reader
	E-BC-K206-S		Spectrophotometry

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