



# Low-density Lipoprotein/Very-low-density Lipoprotein Microplate Assay Kit

**Catalog # AS0115**

Detection and Quantification of Low-density

Lipoprotein/Very-low-density Lipoprotein Content in Serum, Plasma and other biological samples Samples.

This instruction must be read in its entirety before using this product.

For research use only, Not for use in diagnostic procedures.

Contact information:

Tel:+1 (301) 446-2499 Fax:+1 (301) 446-2413

Email:[techcn@signalwayantibody.com](mailto:techcn@signalwayantibody.com) Web:[www.sabbiotech.com](http://www.sabbiotech.com)

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## I. INTRODUCTION

Lipoproteins transport the majority of plasma lipids including cholesterol and triglycerides. High-density lipoprotein (HDL), low-density lipoprotein (LDL), and very-low-density lipoprotein (VLDL) are the lipoproteins responsible for the vast majority of cholesterol transport in the blood. High LDL levels and low HDL levels are strongly associated with increased risk of adverse cardiovascular events.

In this kit, serum HDL and LDL/VLDL are first separated and then the cholesterol concentration of each is determined by a coupled enzyme assay. The products can be measured at a colorimetric readout at 550 nm.

## II. KIT COMPONENTS

| Component            | Volume     | Storage              |
|----------------------|------------|----------------------|
| 96-Well Microplate   | 1 plate    |                      |
| Assay Buffer         | 30 ml x 1  | 4 °C                 |
| Precipitation Buffer | 10 ml x 1  | 4 °C                 |
| Diluent              | 20 ml x 1  | 4 °C                 |
| Enzyme               | Powder x 1 | -20 °C, keep in dark |
| Dye Reagent          | Powder x 1 | 4 °C, keep in dark   |
| Standard(10 mmol/L)  | 1 ml x 1   | 4 °C                 |
| Technical Manual     | 1 Manual   |                      |

**Note:**

**Enzyme:** add 10 ml Diluent to dissolve before use.

**Dye Reagent:** add 10 ml Diluent to dissolve before use.

## III. MATERIALS REQUIRED BUT NOT PROVIDED

1. Microplate reader to read absorbance at 550 nm
2. Distilled water
3. Pipettor
4. Pipette tips
5. Centrifuge
6. Timer

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#### IV. SAMPLE PREPARATION

1. For serum, plasma and other biological samples

Add 100  $\mu$ l serum and 100  $\mu$ l Precipitation Buffer into the microcentrifuge tube, mix, centrifuged at 3,000g 25 °C for 5 minutes. Remove all the supernatant from the microcentrifuge tube. Transfer 100  $\mu$ l Assay Buffer to the microcentrifuge tube and mix by repeated pipetting.

## V. ASSAY PROCEDURE

Add following reagents into the microplate:

| Reagent      | Sample      | Standard    | Blank       |
|--------------|-------------|-------------|-------------|
| Sample       | 10 $\mu$ l  | --          | --          |
| Standard     | --          | 10 $\mu$ l  | --          |
| Assay Buffer | --          | --          | 10 $\mu$ l  |
| Enzyme       | 100 $\mu$ l | --          | --          |
| Diluent      | --          | 100 $\mu$ l | 100 $\mu$ l |
| Dye Reagent  | 100 $\mu$ l | 100 $\mu$ l | 100 $\mu$ l |

Mix, 37 °C wait for 10 minutes, measured at 550 nm and record the absorbance.

**Note:** The concentrations can vary over a wide range depending on the sample. For unknown samples, we recommend doing a pilot experiment & testing several doses to ensure the readings are within the Standard Curve range.

## VI. CALCULATION

1. According to the serum sample

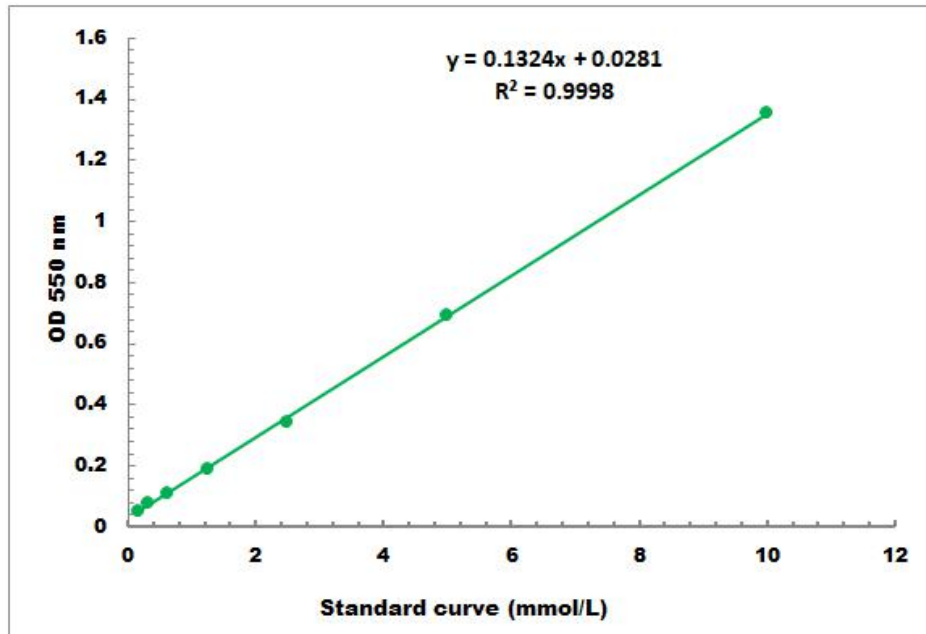
$$\text{LDL/VLDL (mmol/L)} = C_{\text{Standard}} \times (\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / (\text{OD}_{\text{Standard}} - \text{OD}_{\text{Blank}})$$

$$= 10 \times (\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / (\text{OD}_{\text{Standard}} - \text{OD}_{\text{Blank}})$$

$C_{\text{Standard}}$ : the concentration of Standard, 10 mmol/L.

## VII. TYPICAL DATA

The standard curve is for demonstration only. A standard curve must be run with each assay.



Detection Range: 0.1 mmol/L - 10 mmol/L

## VIII. TECHNICAL SUPPORT

For troubleshooting, information or assistance, please go online to [www.sabbiotech.cn](http://www.sabbiotech.cn) or contact us at [techcn@signalwayantibody.com](mailto:techcn@signalwayantibody.com)

## IX. NOTES