



Research Product

# AZWELL LPC Assay Kit

Please read carefully this manual before use of the kit.

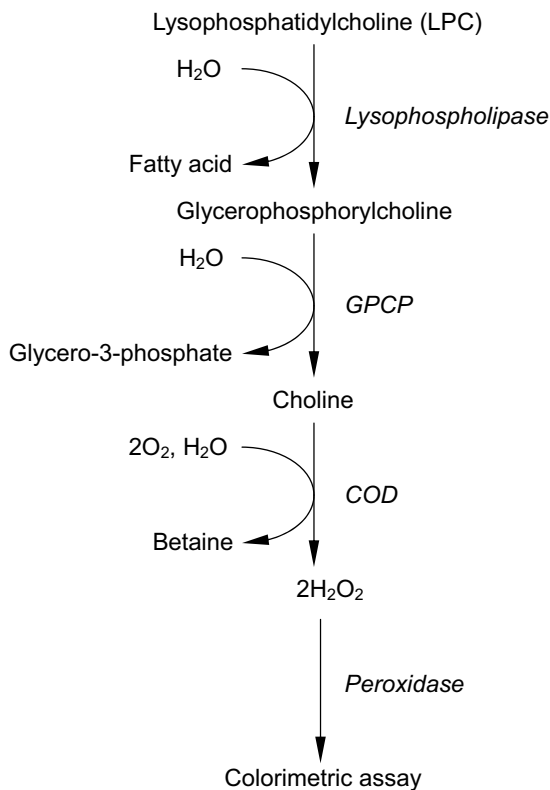
**Code: ALF-274729843**

AZWELL LPC Assay Kit is an enzymatic assay kit for lysophosphatidylcholine (LPC) concentration.

## 【Characteristics】

1. It is unnecessary to prepare the reagents. All reagents are liquid.
2. It is stable for 12 months from produce at 2-8°C.
3. It is applicable to a biochemical automatic analyzer for clinical test.
4. It does not require any pretreatment of samples such as lipid extraction.
5. It is applicable to microplate reader with 96 well microplate.
6. It is indicated as Total LPC concentration.

## 【Principle】



LPC is hydrolyzed with lysophospholipase, followed by glycerophosphorylcholine phosphodiesterase (GPCP) and choline oxidase (COD). Subsequently, generated hydrogen peroxides are colorimetrically measured in the presence of peroxidase.

## 【Preparation and Procedure】

### 1. Preparation of reagents

No preparation is required in all reagents containing a calibrator.

### 2. Test procedure

#### ①For automatic analyzer

This kit can be used with various automatic analyzers for clinical test. The following example is for Roche/Hitachi 917.

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TEST [LPC]
ASSAY CODE [2POINT END][10][16][34][ 0][ 0]
WAVELENGTH(Sub/Main) [700][546]
SAMPLE VOLUME [6.0]
R1 VOLUME [240]
R3 VOLUME [ 80]

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CALIB. METHOD [LINEAR]
STD.(1)CONC.-POS.-VOL. [ 0][99(water)][6.0]
STD.(2)CONC.-POS.-VOL. [1000][option][6.0]

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#### ②For microplate reader

- 1) Sample (5µL in human serum) is added to 150µL R1 in 96 well microplate (flat bottom), and pre-incubated for 5 minutes at 37°C or room temperature. 50µL R2 is added to above-mentioned mixture following an absorbance measurement at 550 nm, and furthermore incubated for 5-10 minutes at 37°C or room

temperature. Subsequently, absorbance is measured at 550nm, and absorbance measured just before the addition of R2 is subtracted from it (Ea). It is recommended that absorbance at 700nm is measured simultaneously in this process for avoidance of interference in turbidity, if possible.

- 2) Reagent blank is measured in similar way except using pure water or saline instead of sample (Eb).
- 3) Calibrator (1,000 $\mu$ mol/L 1-palmitoyl-LPC) contained in the kit is measured in similar way (Es).
- 4) LPC concentration is calculated in the following formula.

$$\text{LPC}(\mu\text{mol/L}) = (\text{Ea}-\text{Eb}) / (\text{Es}-\text{Eb}) \times 1,000$$

### 【Operational notices】

1. Sample  
In human serum or plasma, their samples should be measured as soon as possible after blood collection.
2. Interference substance  
Hemoglobin 500mg/100mL, bilirubin 10mg/100mL, ascorbate 50mg/100mL, glucose 1,000mg/100mL, EDTA-disodium 300mg/100mL, heparin-sodium 20mg/100mL hardly affect the assay value.
3. Please mix the containing calibrator by turning upside down before use.

### 【Performance】

1. Sensitivity: 0.4-0.6 absorbance change at LPC 1,000 $\mu$ mol/L.  
Less than 0.01 absorbance change at reagent blank.

2. Reproducibility: CV= below 5.0% (n=5)
3. Measurement range: 50-1,500 $\mu$ mol/L

### 【Package】

	Type 50
R1	50 mL × 1
R2	18 mL × 1
Calibrator	3 mL × 1

### 【Cautions】

1. For research use only. Not for use in diagnostic procedures.
2. Store the reagents at 2-8°C. Do not use any reagents that are expired.
3. Please use the kit in accordance with this manual.
4. Samples should be handled with care to avoid infection, as they may contain infectious agents such as HBV, HCV and HIV.
5. Avoid contact with eyes. If this occurs, immediately flush eyes with plenty of water and then go to the doctors.

### 【Storage and Shelf life】

1. Storage: 2-8°C
2. Shelf life: 12 months after production

### 【Reference】

Kishimoto T et al. An enzymatic assay for lysophosphatidylcholine concentration in human serum and plasma. *Clin Biochem* 2002; **35**:411-6.



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