(FOR RESEARCH USE ONLY. DO NOT USE IT IN CLINICAL DIAGNOSIS!)

Albumin (ALB) Assay Kit (Bromocresol Green Method)

Catalog No.: BC00049

Size: 100T

Please read the instructions carefully before use. If you have any questions or need further help during experiment, please don't hesitate to contact us through the following methods:

✉ Email (Sale) order@enkilife.com

✉ Email (Techsupport) techsupport@enkilife.com

☎Tel: 0086-27-87002838

Website: www.enkilife.com

Shelf life: Please refer to the label on the outer package.

Techsupport: In order to provide you with better service, please inform us the lot number on the label of the outer package.

Basic Information

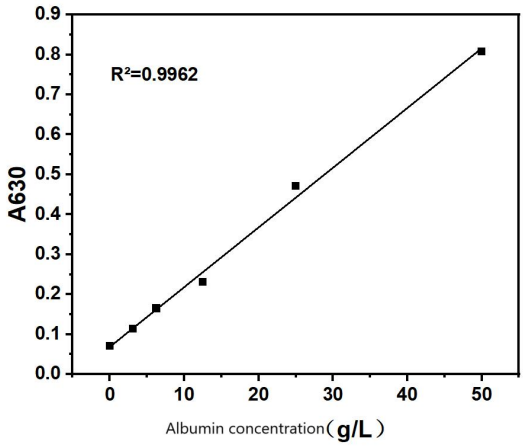
Product Name	Albumin (ALB) Assay Kit (Bromocresol Green Method)
Detection Method	Colorimetric
Sample Type	Tissue, cell, serum, plasma, urine and other samples
Assay Type	Quantitative
Detection Instrument	Microplate reader (620-640 nm, optimal detection wavelength 630 nm)
Range	3.125-50g/L
Sensitivity	0.1643g/L

Product Introduction

Albumin is one of the most common proteins in blood and urine. It plays an important role in maintaining fluid balance in the body, transporting nutrients and drugs, and regulating osmotic pressure.

Principle

Bromocresol green (BCG) is a widely used protein stain. When the pH value is 4.0-4.2, albumin binds to bromocresol green, and the solution changes from yellow to green. The color is proportional to the albumin concentration. The albumin content in serum can be calculated by colorimetry. The figure below shows the standard curve of albumin determination in this kit.



Components

No.	Components	Size (100T)	Storage
Reagent 1	Color Developer	30 mL	-20℃, after opening store at 2-8°C in the dark for 6 months.
Reagent 2	50 g/L Standard	1.2 mL	-20℃, after opening store at -20°C for 6 months.
Consumable 1	Microplate	1 plate	RT
Consumable 2	Plate Sealer	2 pieces	RT

Storage

The unopened kit can be stored at -20℃ for 12 months.

Preparation

- **Sample handling**

1. Liquid samples such as urine, serum, plasma, etc.: can be measured directly.
2. Tissue samples: Homogenize in PBS (0.01 M, pH 7.4) or physiological saline (0.9% NaCl), centrifuge after homogenization, and take the supernatant for testing.
3. Cell samples: Take 1×10^6 cells and add 300-500 μL PBS (0.01 M, pH 7.4) or physiological saline (0.9% NaCl) for homogenization. After homogenization, centrifuge at 10000×g for 10 min at 4 °C, take the supernatant and place it on ice for testing.
4. **Note:** The diluent is physiological saline (0.9% NaCl) or PBS (0.01 M, pH 7.4).

- **Preparation of the kit**

1. Before testing, equilibrate the reagents in the kit to room temperature. Double distilled water, physiological saline (0.9% NaCl) or PBS (0.01 M, pH 7.4) are required.
2. Prepare different concentrations of standards by diluting the standard solution with water using the halving dilution method, to concentrations such as 50, 25, 12.5, 6.25,

3.125, 0 (blank well) g/L.

Operation process

1. Standard wells: Take 10 μL of different concentrations of standards and add them to the corresponding standard wells. Sample wells: Take 10 μL of samples and add them to the corresponding sample wells.
2. Add 250 μL of color developer to each well from step (1).
3. Oscillate on a microplate reader for 10 s, let stand at room temperature for 10 min, and measure the OD value of each well at 630 nm.

	Standard well	Measurement well
Different concentrations of standard solutions (μL)	10	--
Sample to be tested (μL)	--	10
Color developer working solution (μL)	250	250
Oscillate on a microplate reader for 10 s, let stand at room temperature for 10 min, and measure the OD value of each well at 630 nm.		

Calculation

Standard fitting curve: y = ax + b

Albumin concentration calculation formula: Albumin (ALB) content (g/L) = (ΔA630-b) ÷ a × f

Annotation:

y: OD value of standard well - OD value of blank well (OD value when the concentration of standard is 0)

x: concentration corresponding to the absorbance

a: slope of the curve

b: intercept of the curve

ΔA630: Sample OD value - blank OD value (OD value when the standard concentration is 0)

f: dilution factor of the sample before adding it to the detection system

Notes

1. The optimal detection wavelength of the microplate reader is 630 nm, and detection can be performed in the range of 620 nm-640 nm.
2. This product is intended for scientific research use only by professionals and must not be used for clinical diagnosis or treatment, in food or drugs, or stored in ordinary residences.