CREATIVE BIOMART®
Assay Kit

Total protein quantitative assay kit

Product Information

Short Name

Total protein quantitative assay kit

Cat.No. KITZ-008

Size

96 tests

Product Overview

The determination of protein content is one of the most basic analytical methods in biochemical research. Protein molecules have -NH3+ group, when the brown-red Coomassie brilliant blue chromogenic agent is added to the protein standard solution or sample, the anion on the Coomassie brilliant blue dye is combined with the protein-NH3 +, so that the solution turns blue, and the protein content can be calculated by measuring the absorbance.

Storage

stored at 4°C for 1 month, if you want to extend the storage time, please separate the standard liquid and freeze it at -20°C for 6 months

Shipping

Gel pack

Kit Components

Coomassie Brilliant blue storage solution, 60mL×1 bottle, 4°C
Protein standard solution 0.5mL×1vial -20°C

Detection method Absorbance (595 nm)

Assay Protocol

Preparation of chromogenic solution
Prepared according to the ratio of Coomassie brilliant blue storage solution: distilled water = 1:4 (5

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times dilution), and prepared at present.

Sample pretreatment

1. Tissue samples

The tissue to be measured was weighed accurately, and then 9 times the volume of homogenate medium (0.1mol/L phosphate buffer or 0.9% normal saline is recommended and pH 7.0-7.4 is recommended) was added to the weight (g) : volume (mL)=1:9. Mechanical homogenate was performed under ice bath conditions. Centrifugation was performed at 2500 RPM for 10 min, and the supernatant (10% homogenate supernatant) was taken for testing. (Note: The optimum concentration of homogenate supernatant is different for different samples. The homogenate supernatant can be diluted and determined as needed, and the sample concentration when the OD value is close to the standard OD value is selected. The homogenate medium is not limited to the normal saline and phosphate buffer listed above. Other extracts (which do not interfere with the reagent reaction in principle) can also be detected.

2. Serum (plasma) sample:

Serum (plasma) can be diluted in normal saline according to serum: normal saline =1:49, to be tested.

3. Other biological samples

In general, the measurement range is 0.1-1.3 g/L (mg/mL). (There are differences in the dilution of different samples), please do a pre-test of 1 or 2 samples before batch testing.

Procedure

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Calculate

$$\text{Concentration sample (g/L)} = \frac{(A\ \text{measurement} - A\ \text{black})}{(A\ \text{standard} - A\ \text{black})} \times C\ \text{standard} \times N$$

N: Dilution factor of sample before testing

Notice:

1. This method has high sensitivity, so the sample protein concentration must be diluted to below 1.3g/L (1.3mg/mL), and there is a linear relationship within this range.
2. The concentration of tissue homogenate is generally 0.5% to 2% when measuring tissue protein by Coomassie brilliant blue method.
3. Samples with high protein concentration need to be diluted.
4. The concentration of the standard solution may vary from batch to batch. Please refer to the label for the specific concentration.

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