

# Micro BCA Protein Assay Kit

# **Product Description:**

BCA stands for Bicinchoninic Acid Assay, which is a protein quantification method based on the biuret principle. Under alkaline conditions, the protein peptide bond reduces  $Cu^{2+}$  in copper sulfate to  $Cu^+$ , and then BCA chelates  $Cu^+$  to form a purple complex that strongly absorbs light at a wavelength of 562 nm. The color of the chelate is related to the protein concentration, and the amount of  $Cu^{2+}$  or  $Cu^+$  obtained is proportional to the amount of protein present in the solution, so the protein concentration to be measured can be obtained by measuring the protein absorbance value.

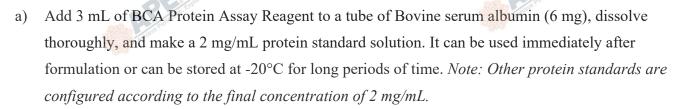
This kit is designed for protein quantification of low protein concentration samples and can measure the total protein concentration of diluted protein solution ( $0.5\sim20 \ \mu g/mL$ ). This kit has the characteristics of simple operation, high stability, high sensitivity, and high compatibility, and has good compatibility with a variety of ionic and non-ionic detergents.

Components	К4102-500 Т	K4102-2000 T
Reagent A	40 mL	160 mL
Reagent B	38 mL	150 mL
Reagent C	2 mL	6 mL
Bovine serum albumin (BSA)	6 mg	15 mg
BCA Protein Assay Reagent	15 mL	35 mL
Store Reagent B at 4°C away from light and the otl	her components at 4°C for a year.	

### Composition and storage conditions

# **Experimental manipulation**

1. Preparation of protein standards (500 T as an example).



b) Seven protein standard concentrations of 0, 2, 5, 10, 20, 40, and 200 µg/mL were prepared according to

the table below. Take care to mix well each time you dilute it.

Numbering	Dilute the volume of liquid	Standard volume	Final concentration
А	4.5 mL	2 mg/mL BSA 0.5 mL	200 µg/mL
В	8 mL	Take 2 mL from tube A	40 µg/mL
С	4 mL	Take 4 mL from tube B	20 µg/mL
D	ten canoe ne 4 mL	Take 4 mL from tube C	10 μg/mL
E des	aner refer 4 mL	Take 4 mL from tube D	<sub>cheve</sub> 5 μg/mL
F	3 mL	Take 2 mL from the E tube	2 µg/mL
G	5 mL	0 mL	0 µg/mL

#### 2. BCA working fluid configuration.

According to the number of samples, according to the volume ratio of Reagent A: Reagent B: Reagent C = 26:25:1, prepare an appropriate amount of BCA working solution, and mix well. The BCA working solution is stable within 8 hours at room temperature.

#### 3. Protein concentration determination

- a) 150 μL of different concentrations of protein standards were added to the protein standard wells of the 96-well plate.
- b) Place 150  $\mu$ L of sample in the sample well of a 96-well plate. If the sample is less than 150  $\mu$ L, add the standard dilution to 150  $\mu$ L and note the sample volume.
- c) Add 150  $\mu$ L of BCA working solution to each of the above wells and incubate at 37°C for 2 h.
- d) Cool to room temperature.
- e) The absorbance at A562 was determined with a microplate reader.
- f) The protein concentration in the sample is calculated from the standard curve and the sample volume used.

## Precautions

- 1. Measurement range: 0.5~20 µg/mL for spectrophotometry and 2~40 µg/mL for microplate plate.
- 2. Compatible with most ionic or non-ionic detergents.
- 3. Protein standards should be mixed first after all are dissolved, and then diluted into a series of protein standards of different concentrations.
- 4. This product is for scientific research purposes only.

