Protein Assay Kit (Catalog# TBS2005)

Bradford Colorimetric Protein Determination at 595 nm

DESCRIPTION

Simple, direct, and automation-ready procedures for measuring protein concentration are very desirable. Tribioscience's protein assay kit is based on the Bradford Coomassie Blue method. In acidic conditions, protein-binding causes the dye to change from reddish-brown to bright blue (absorption maximum equals 595nm), and the intensity of the color is directly proportional to the protein concentration in the sample.

APPLICATIONS

Direct Assays: total protein concentration.

KEY FEATURES

Sensitive and accurate. Use 5 µL samples. Detection linear range 0.005 – 1.5 mg /mL protein in 96-well plate assay.

Simple and high throughput. Only add reagent into sample procedure that can be readily automated as a high-throughput assay in 96-well plates for thousands of samples per day.

Versatility: assays can be executed in 96-well plate or cuvette.

KIT CONTENTS (1000 tests in 96-well plates)

Reagent: 50 mL 5 x concentrate

Protein standard: 1x 0.125, 0.25, 0.5, 0.75, 1.0 and 1.5 mg/mL BSA

Storage conditions: The kit is shipped at room temperature. Store the reagent at 4°C and standard at -20°C, respectively. Shelf life: 12 months after receipt.

PROCEDURES

Reagent Preparation:

Prepare enough working reagent for each reaction well (200uL/well) by adding 1 vol of the 5 x Reagent to 4 vol of distilled water.

Procedure using 96-well plate:

1.Transfer 5 µL protein Standards and sample in duplicate to wells of a clear flat-bottom 96-well plate.

2. Add 200 µL working reagent and tap lightly to mix.

3. Measure OD at 570-630nm (peak 595nm).

Procedure using cuvette:

1.Prepare standards as in the 96-well plate assay. Transfer 25 µL Standards and 25 µL samples to cuvets.

2. Add 1000 µL working reagent and tap lightly to mix.

3. Measure OD at 570-630nm (peak 595nm).

CALCULATION

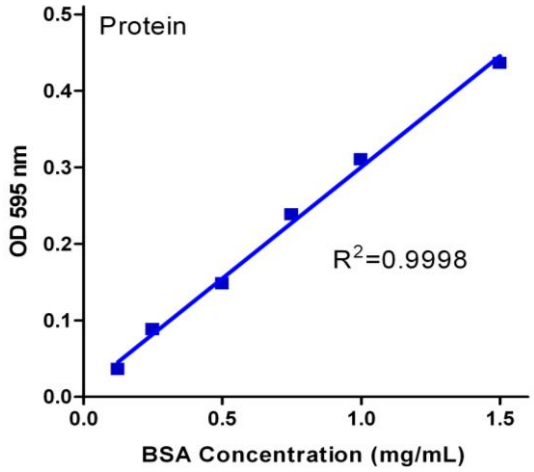
Subtract blank OD (water) from the standard OD values and plot the OD against standard concentrations. Use the standard curve to determine the sample protein concentration.

MATERIALS REQUIRED, BUT NOT PROVIDED

Clear flat-bottom 96-well plates.
Plate reader for 96-well plate.
Cuvettes and spectrophotometer.

GENERAL CONSIDERATIONS

If protein concentration is > 1.5 mg/mL, dilute samples in distilled water, and use OD values that lie within the calibration curve to calculate the sample protein concentration. Reading can be performed as soon as the reagent and sample are mixed.



Standard Curve in 96-well plate.

REFERENCES

1. Bradford, MM. A rapid and sensitive for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. *Analytical Biochemistry 72:* 248-254. 1976.
2. Stoscheck, CM. Quantitation of Protein. *Methods in Enzymology 182:* 50-69 (1990).

RELATED PRODUCTS:

Protein Cell Lysis Buffer (TBS5001)
BSA Standard solution (TBS5002)
Universal Block Buffer (TBS5013)
Protein Loading Buffer (TBS5014)
RIPA Lysis Buffer (TBS5017)

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