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Lowry Protein Assay Kit

Cat No: PC0030

Size: 1000T(Microplate reader)/100T(Spectrophotometer)

Storage: BSA protein standard is stored at 4℃ for 3 months, or at -20℃ for 1 year, other reagents are stored at room temperature for 1 year. After the reagent is opened for use, please keep it airtight in time. If the color of Folin phenol reagent C(1N) change to dark green, it is invalid.

Components:

Folin phenol reagent A	100ml×2
Folin phenol reagent B	5ml
Folin phenol reagent C (1N)	20ml
PBS dilution	30ml
BSA standard(5mg/ml)	1ml

Introduction:

The folin phenol reagent method consists of two steps. The first step is protein react with copper to form protein-copper complex in an alkaline solution. The second step is the complex reduce the Folin reagent to produce dark blue. The amount of color produced is proportional to protein concentration. The quantitative rang of protein is 5~100μg/ml. Folin reagent chromogenic reaction is caused by tyrosine, tryptophan and cysteine. Therefore, phenols, citric acid and sulfhydryl compounds in the sample have interfere. Besides, different proteins have different color intensity due to different contents of tyrosine and tryptophan.

Protocol

Prepare working solution:

1. Folin phenol working solution: According to the requirement, mix the folin phenol reagent A and B in a 50:1 ratio, the mixture will be valid for 24 hours and then expire.
2. BSA Standard working solution: According to the requirement, take an appropriate amount of BSA standard and dilute the BSA standard to 0.5mg/ml with PBS solution.

A. Microplate reader (96-well plates)

3. Add 0, 2, 4, 6, 8, 12, 16, 20μl BSA standard(0.5mg/ml) to 96-well plates, add PBS to total 20μl.
4. Dilute the sample properly, add 20μl sample to 96-well plates.
   Note: To avoid errors in operation steps, make the sample point located at 1/2 behind of the standard line as much as possible, as the pipette has a large error when taking a small amount of sample and the point in front of the standard line may not be very accurate.
5. Add 200μl of folin phenol working solution to each hole, shake gently, mix well, incubate at room temperature for 10 min.
6. Add 20μl folin phenol reagent C(1N) to each well, mix quickly, incubate at 37℃ for 30min. Measure the protein concentration of A650 by microplate reader.

B. Spectrophotometer (followed by protocol 2)

3. Take eight (or more) 5ml centrifuge tubes, add reagent following the table.

Centrifuge tubes No.	1	2	3	4	5	6	7 (sample 1)	8 (sample 2)	9 (sample 3)
BSA Standard working solution	0	40μl	80μl	120μl	160μl	200μl	200μl	200μl	200μl
PBS	200μl	160μl	120μl	80μl	40μl	0	0	0	0
Folin phenol working solution	2ml	2ml	2ml	2ml	2ml	2ml	2ml	2ml	2ml
mix well, incubate at room temperature for 10 min.									
Folin phenol reagent C(1N)	200μl	200μl	200μl	200μl	200μl	200μl	200μl	200μl	200μl

4. Mix well. Incubate at 37 ℃ for 30min. Measure the absorbance at 650nm by spectrophotometer and calculate protein concentration.

Related products

PC0001 Protein standard solution (5mg/ml BSA)

PC0015 5×G250(Protein quantitative analysis)

PC0021 BCA Reagent

PC0020 BCA Protein Assay Kit

PC0010 Bradford Protein Assay Kit

R0010 RIPA buffer(high)

PR1600 Prestained Protein Marker(14.4kD-97.4kD)

R0050 Nuclear Protein Extraction Kit

P1015 SDS-PAGE loading buffer,4×(with DTT)

P1200 SDS-PAGE Gel Kit

D1060 WB Transfer Buffer,10×

PE0010 ECL Western Blotting Substrate