Protein Estimation by BCA Method

Product Overview

Introducing DX/DT Enzymes' BCA Reagent A and B for precise protein estimation. These cutting-edge reagents ensure accuracy, sensitivity, and ease of use in molecular biology applications. Compatible with various sample types, they simplify high-throughput experiments while maintaining consistency and reproducibility. Manufactured under stringent quality control, DX/DT Enzymes guarantees reliable results, setting a new standard for protein quantification in research and diagnostics. Trust in the precision and quality of BCA Reagent A and B to advance your molecular biology experiments with confidence.

Storage

- BCA Reagent A and B, Room Temperature (15 to 30 ℃)
- Working Reagent (WR) (A+B), 4℃

Catalog

- RC20-1 > 100ml Reagent A, 5ml Reagent B
- RC20-3 > 1000ml Reagent A, 50 ml Reagent B

Protocol

PART 1: PREPARATION OF WORKING REAGENT (WR)

Prepare WR by mixing 50 parts of BCA Reagent A with 1 part of BCA Reagent B (50:1, Reagent A:B). For example, combine 100 mL of Reagent A with 2mL of Reagent B. Total volume of working reagent now is 102 mL. When reagents are uniformly mixed, a vibrant green colour shall appear. You can store the working reagent at 4℃ for 7 days. It is recommended to prepare fresh working reagent based on number of unknown samples, everytime.

For One Sample, 2ml of working reagent is taken for the assay.

PART 2: PREPARATION OF WORKING STANDARD (WS)

BSA Stock Concentration: 2mg/ml

The BSA standard can be diluted based on expected protein concentration ranges. Diluent can be buffer/matrix in which your unknown protein of interest is currently present.

Example protein working range: 200µg - 1000µg/ml.

Example calculations are given below

Vial Name	Diluent (µL)	BSA Stock (µL)	Total (µL)	Final BSA concentration (µg/ml)
S1	90	10	100	200
S2	80	20	100	400
S3	70	30	100	600
S4	60	40	100	800
S5	50	50	100	1000
Unknown 1, 2, 3....	0	0	100	?

If you suspect that, your unknown sample is concentrated, you can dilute it accordingly. Final volume of any sample MUST be 100µL.

PART 3: STEP BY STEP PROCEDURE FOR THE ASSAY

1. Take 100µL of above samples in a clean glass test tube.
2. Add 2mL of working reagent to each tube and mix well.
3. Incubate the tube at selected temperature and time

- Standard Protocol: 37°C for 30 minutes (working range = 200–1000 µg/mL)
- RT Protocol: RT for 2 hours (working range = 200–1000 µg/mL)
- Enhanced Protocol: 60°C for 15-30 minutes (working range = 5–250 µg/mL)

Use a water bath to heat tubes for either Standard (37°C incubation) or Enhanced (60°C incubation) Protocol. Using a forced-air incubator can introduce significant error in color development because of uneven heat transfer.

4. Cool all the test tubes
5. Set the spectrophotometer to read at 562nm wavelength. ZERO the instrument, using diluent (BLANK SAMPLE)
6. Take out the reading for all the standard and unknown samples within 10 minutes or as fast as possible. Prolonging the reading time may interfere with absolute readings.
7.Prepare a standard curve by plotting 562 nm measurement for each BSA standard vs. its concentration in µg/mL. Use the standard curve to determine the protein concentration of each unknown sample.

Other related products

CDNA Synthesis KIT
LEO Prime mastermix
RIGEL -HIGH FIDELITY MASTERMIX
Onestep RTPCR kits
DNA Markers (100bp, 50bp and 1KB)
POLARIS SYBR GREEN Mastermix
POLARIS AMP Taqman probe mastermix
Common Buffers and Reagents
SAFESTAIN DYE

Expert Services

Gene Synthesis
CRISPR KO vectors
Peptide Synthesis
IVT products
sgRNA , miRNA, Antisense RNA synthesis
NGS
HYBRIDOMA
Protein Expression in Bacteria, Yeast, Mammalin and Insects

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