Tinzyme Co., Limited

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dsDNA BR Assay Kit

Product Number: DA43S

Shipping and Storage

Store at 2 ~ 8°C in the dark, transport with ice packs; recommend Equalbit dsDNA BR Standard 2 for long-term storage at -30 ~ -15°C.

Component

Component	DA43S
dsDNA BR Reagent(200× in DMSO)	250μL
dsDNA BR Buffer	50mL
dsDNA BR Standard 1	1mL
dsDNA BR Standard 2	1mL

Description

The Equalbit dsDNA BR (Broad Range) Assay Kit is a simple, sensitive, and accurate fluorescent quantitative detection kit for double-stranded DNA (dsDNA). This kit includes fluorescent detection reagents, buffer, and dsDNA standards. It exhibits excellent linearity for dsDNA samples in the range of 4–2,000ng, enabling precise quantification of samples with concentrations between 0.2–2,000ng/μL. The kit demonstrates higher selectivity for dsDNA compared to RNA and maintains good tolerance to common contaminants such as salts, free nucleotides, proteins, solvents, and detergents. This product is easy to operate and can be performed at room temperature. Before use, dilute the fluorescent detection reagent with buffer to prepare the working solution, then add the dsDNA sample to be tested. The Qubit fluorescence instrument can then be used for detection.

Scope of Application

dsDNA samples with concentrations ranging from 0.2 to 2,000ng/μL.

Protocol

The following steps are applicable to Qubit fluorescence analyzer.

1. Before use, equilibrate the components in the kit to room temperature.
2. Take a sufficient number of 0.5mL PCR tubes for the detection of samples and standards.
   Note: Only 0.5mL PCR tubes can be used, it is recommended to use 0.5mL PCR Tubes.
3. Label each PCR tube cap. Do not label on the side wall of the PCR tube to avoid affecting the collection of fluorescence signals.
4. Prepare testing working fluid. Take the dsDNA BR Reagent from the reagent kit, dilute it with dsDNA BR Buffer at a ratio of 1:200, and prepare the detection working solution for immediate use. Prohibition of using glass containers to prepare testing fluids
   Sufficient testing fluid should be prepared. For example, if there are 7 DNA samples to be tested and two standard samples are added, 2mL of testing solution needs to be prepared. Take 10μL of dsDNA BR Reagent and add it to 1990μL of dsDNA BR Buffer. Vortex and mix well for later use.
5. Prepare testing standards. Take 190μL of detection solution into a standard PCR tube, and add 10μL of Standard 1 and Standard 2 to the corresponding standard PCR tubes.
6. Prepare test samples. Take 180-199μL of detection working solution into the detection PCR tube, and add 1-20μL of the dsDNA sample to be tested, so that the final volume of each detection sample is 200μL.
   To add 1-2μL of sample, please use a 2μL pipette for optimal results.
7. Vortex oscillation for 2-3 seconds, collect the liquid by centrifugation to the bottom of the tube, and try to avoid generating

bubbles as much as possible.

8. Incubate all PCR tubes at room temperature in the dark for 2 minutes. According to the operating instructions of the Qubit fluorescence analyzer, select the dsDNA Broad Range program to measure the concentration.

Note

1. Fluorescent dyes have quenching issues, please try to avoid light as much as possible to slow down fluorescence quenching.
2. Please invert and mix the standard and sample before use to avoid uneven absorption and result deviation.
3. To ensure the accuracy of quantitative results, please use a calibrated pipette for operation.
4. Please perform quantitative testing at room temperature. Before use, balance the components in the reagent kit to room temperature. During the experiment, do not hold the PCR tube for a long time to avoid result deviation.
5. Please be sure to complete the testing of all samples within 3 hours after sample addition and under dark conditions to avoid fluorescence quenching and result bias.