Equalbit dsDNA BR Assay Kit

EQ122

Version 24.1

Product Description

Equalbit dsDNA BR (Broad Range) Assay Kit is a simple, sensitive and accurate double-stranded DNA (dsDNA) fluorescence quantitative detection kit, which contains fluorescent dye, buffer and dsDNA standards. It has good linearity in the range of 4 - 2,000 ng dsDNA, allowing accurate quantification of dsDNA concentrations from 0.2 ng/μl to 2,000 ng/μl. The kit is highly selective for dsDNA over RNA. In addition, it has good impurity tolerance to common contaminants, such as RNA, salts, free nucleotides, proteins, solvents, detergents, etc. This product is easy to operate and can be performed at room temperature. Before use, please dilute the fluorescence detection reagent into a working solution with buffer and add the dsDNA sample into it. The result will be obtained by the Qubit Fluorometer.

Components

Components	EQ122-01 (100 assays)	EQ122-02 (500 assays)
Equalbit dsDNA BR Reagent (200 × in DMSO)	250 μl	1.25 ml
Equalbit dsDNA BR Buffer	50 ml	250 ml
Equalbit dsDNA BR Standard #1 (0 ng/μl in TE Buffer)	1 ml	5 ml
Equalbit dsDNA BR Standard #2 (100 ng/μl in TE Buffer)	1 ml	5 × 1 ml

Storage

Store at 2 ~ 8°C and protect from light. Ship on ice pack.

▲ It is recommended the Equalbit dsDNA BR Standard #2 to be stored at -30 ~ -15°C for long-term.

Applications

It is applicable for detection of 0.2 - 2,000 ng/μl of dsDNA sample.

Notes

1. Be sure to protect from light due to the fluorescent dye may quench.
2. Mix thoroughly standrads and samples by inversion before use to avoid inaccurate results.
3. Please use the calibrated pipette to ensure the accuracy of quantitative results.
4. Please perform the quantitative assay at room temperature. Equilibrate all the components to room temperature before use. During the experiment, do not hold the detected PCR tube in your hand for a long time because this warms the solution and results in a different reading.
5. Please complete the detection within 3 h of adding samples to avoid fluorescence quenching that could lead to inaccurate results.

Mechanism & Workflow

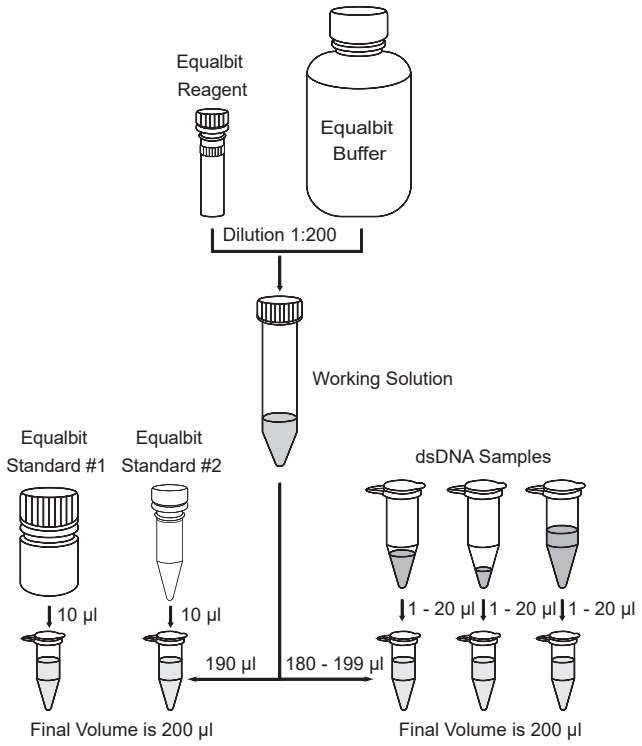

Fig 1. Workflow of Equalbit dsDNA BR Assay Kit

Experiment Process

This protocol is suitable for Qubit Fluorometer.

1. Equilibrate all the components to room temperature before use.
2. Prepare sufficient 0.5 ml PCR tubes to accommodate all samples and standards.
   ▲ Use only 0.5 ml PCR tubes for detection. It is recommended to use 0.5 ml PCR Tubes (Vazyme #PCR00105).
3. Label the lid of each standard and sample tube correctly. Do not label the side of the tube as this could interfere with the sample read.
4. Freshly prepare the working solution by diluting the Equalbit dsDNA BR Reagent 1 : 200 in Equalbit dsDNA BR Buffer. **Do not mix the working solution in a glass container**.
   ▲ Ensure that you have sufficient working solution to accommodate all standards and samples. For example, for 7 samples, prepare enough working solution for the samples and 2 standards: 200 µl per tube in 9 tubes yields 2 ml of working solution (10 µl of Equalbit dsDNA BR Reagent plus 1,990 µl of Equalbit dsDNA BR Buffer).
5. Prepare the standard solution. Take 190 µl of working solution into standard PCR tubes, then add 10 µl of Standard #1 and Standard #2 to corresponding standard PCR tubes.
6. Prepare the sample solution. Take 180 - 199 µl of working solution into sample PCR tubes, then add 1 - 20 µl of DNA samples respectively. So that the final volume of each testing sample is 200 µl.
   ▲ If add 1 - 2 µl of samples, it is recommended to use the 2 µl pipette for accurate results.
7. Gently vortex for 2 - 3 sec, centrifuge to collect the solution at the bottom of the tube and avoid bubbles.
8. All PCR tubes are incubated at room temperature for 2 min and protect from light. According to the operating instructions of the Qubit Fluorometer, select the dsDNA Broad Range Program to assay the concentration.