Equalbit RNA BR Assay Kit

EQ212

Version 24.1

Product Description

Equalbit RNA BR (Broad-Range) Assay Kit is a simple, sensitive and accurate RNA fluorescence quantitative detection kit, which contains fluorescence detection reagents, buffers and RNA standards. The kit is highly selective for RNA over double-stranded DNA (dsDNA). It has an excellent linearity for RNA samples in the range of 20 - 1,000 ng, allowing accurate quantification of total RNA, rRNA, mRNA concentrations from 1 ng/μl to 1,000 ng/μl. In addition, it has good impurity tolerance to common contaminants, such as salts, free nucleotides, proteins, solvents, detergents, etc. This product is easy to operate and can be carried out at room temperature. Before use, please dilute the fluorescence detection reagent into a working solution with buffer and add the RNA sample into it. The result will be obtained by the Qubit Fluorometer.

Components

Components	EQ212-01 (100 assays)	EQ212-02 (500 assays)
Equalbit RNA BR Reagent (200 × in DMSO)	250 μl	1.25 ml
Equalbit RNA BR Buffer	50 ml	250 ml
Equalbit RNA BR Standard # 1 (0 ng/μl in TE buffer)	1 ml	5 ml
Equalbit RNA BR Standard # 2 (100 ng/μl in TE buffer)	4 × 250 μl	10 × 500 μl

Storage

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

Applications

It is applicable for detection of 1 ng/μl - 1,000 ng/μl of total RNA, rRNA and mRNA samples.

Notes

1. Be sure to protect from light due to the fluorescent dye may quench.
2. Mix detection reagents and RNA standards by inversion before use and centrifuge briefly to collect the reagent at the bottom of the tube.
3. In order to avoid the degradation of RNA standards, please use RNA-free consumables for the experiment and store the standards at 2 ~ 8°C after the experiment.
4. Please use the calibrated pipette to ensure the accuracy of quantitative results.
5. Please perfrom quantitative assay at room temperature. Before use, put each component in the kit at room temperature. During the experiment, do not hold the detected PCR tube with your hand for a long time.
6. Please complete the detection within 3 h of working solution preparation to avoid fluorescence quenching that could lead to inaccurate results.

Machanism & Workflow

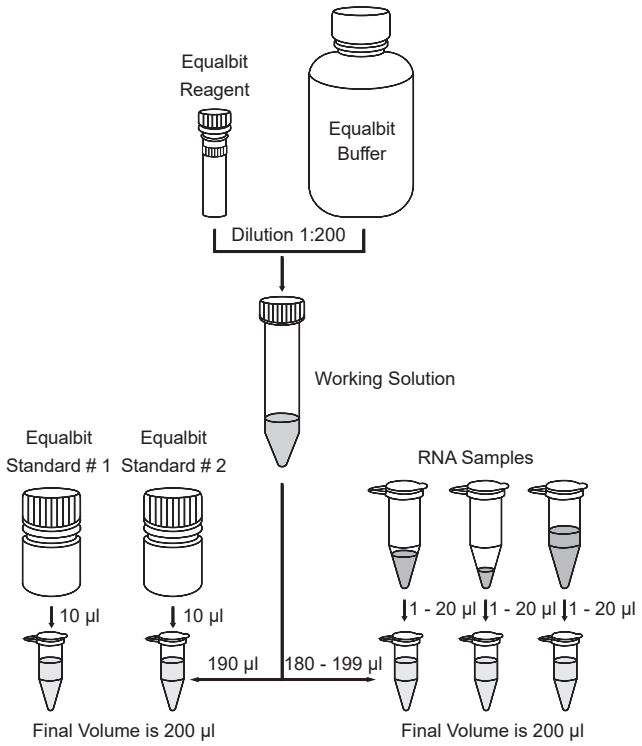

Fig 1. Workfiow of Equalbit RNA BR Assay Kit

Experiment Process

This protocol is only suitable for Qubit 2.0, Qubit 3.0 and Qubit 4.0 fluorimeters.

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 #PCR0010).
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 RNA BR Reagent 1 : 200 in Equalbit RNA 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 RNA BR Reagent plus 1,990 µl of Equalbit RNA 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. Gently vortex for 2 - 3 sec to avoid bubbles. Please make sure that the pipette volume is accurate in this step.
6. Prepare the sample solution. Take 180 - 199 µl of working solution into sample PCR tubes, then add 1 - 20 µl of RNA samples respectively. So that the final volume of each testing sample is 200 µl. Gently vortex for 2 - 3 sec to avoid bubbles.
   ▲ The RNA sample to be tested is added in a volume range of 1 - 20 µl and the working solution is added in a volume range of 180 - 199 µl. The final volume in each tube is 200 µl.
7. All PCR tubes are incubated at room temperature for 2 min and protect from light.
8. According to the operating instructions of the Qubit Fluorometer, select the RNA Broad Detection Program to assay the concentration.