Equalbit RNA BR Assay Kit

Catalog # EQ212

Version 8.1

Vazyme biotech co., ltd.

1. Introduction

The Equalbit RNA BR (Broad-Range) Assay Kit is a simple, sensitive, and accurate RNA fluorescence quantitative detection kit. This kit contains fluorescence detection reagents, buffers, and dsDNA standards. This kit is highly selective for RNA and is not subject to dsDNA. It has an excellent linearity between 20 ng and 1000 ng for RNA samples, providing accurate quantification of total RNA, rRNA, mRNA samples from 1 ng /μl to 1000 ng /μl. This kit has excellent resistance for most conventional pollutants, including salt, free nucleotides, proteins, solvents, and detergents.

The Equalbit RNA BR (Broad-Range) Assay Kit is easy to operate, and the assay can be performed at room temperature. Before use, please dilute the fluorescence detection reagent with buffer into a working solution, and then add the RNA sample for detection by a Qubit® fluorometer.

2. 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

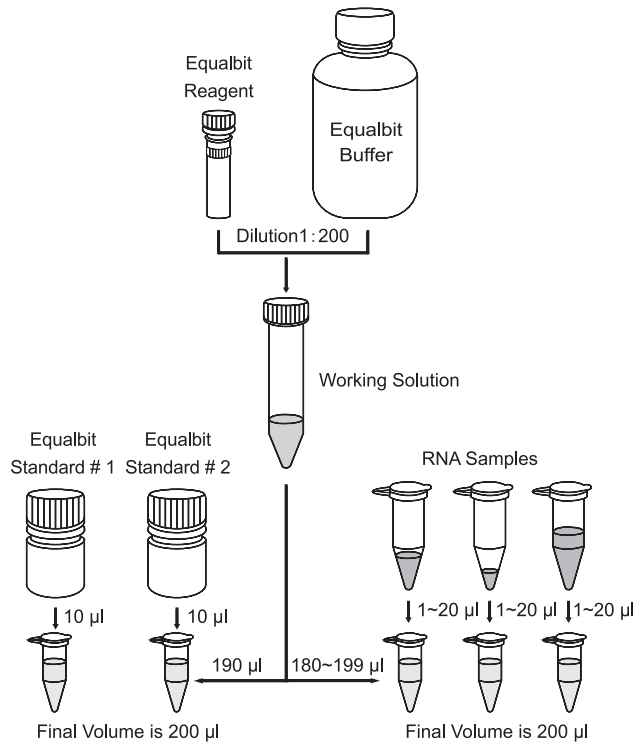
3. Storage

The intact kit should be stored at 2-8℃ for up to 6 months. Protect from light and avoid repeated freeze-thaw cycles.

After the first use, it is recommended to store the Equalbit RNA BR Reagent at room temperature and protect from light, store the Equalbit RNA BR Buffer at room temperature, and store the Equalbit RNA BR Standard #1 and #2 at 4℃.

Transport condition: -20℃ ~25℃.

4. Workflow Overview



5. Protocol

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

(1). Equilibrate all kit components to room temperature before use.

(2). Prepare sufficient 0.5 ml PCR tubes to accommodate all samples and standards.

Note: Only 0.5ml PCR tubes are suitable for detection. It is recommended to use Qubit® assay tubes (Cat. No.# Q32856) or Axygen® PCR-05-C tubes (Cat. No.# 10011-830).

(3). Label the lid of each tube. **DO NOT** label on the side wall, in order to avoid any possible interference in fluorescence signal acquisition.

(4). Prepare fresh working solution of Equalbit RNA BR Reagent, by diluting it in Equalbit RNA BR Buffer according to a ratio of 1:200. **DO NOT** use glass containers for the preparation of working solution.

Note: A sufficient amount of working solution should be prepared to accommodate all samples and standards. For example, to accommodate 7 RNA samples and 2 standards, it is needed to prepare 2 ml of working solution by adding 10 µl of Equalbit RNA BR Reagent to 1990 µl of Equalbit RNA BR Buffer. Mix thoroughly by vortexing.

(5). Prepare standards. Load 190 µl of working solution to each tube used for standards, then carefully add exactly 10 µl of Standard #1 and Standard #2 to the corresponding tube, respectively. Gently vortex for 2-3 sec to avoid bubbles. Make sure the exact pipetting of 10 µl.

(6). Prepare samples. For each tube used for samples, add 180 µl - 199 µl of working solution, and then carefully add 1 µl - 20 µl of RNA sample. Make sure the final volume in each tube is 200 µl. Gently vortex for 2-3 sec to avoid bubbles.

(7). Incubate at room temperature for 2 min. Protect from light.

(8). Load the sample tubes into a Qubit® Fluorometer and test the sample concentration by performing the RNA High Sensitivity Detection Program.

6. Application Notes

(1). Protect from light during storage to avoid quenching of fluorescent dyes.

(2). For all reagent and standards in this kit, please mix thoroughly before use by gently inverting tube. Centrifuge for 1-2 sec to collect the reagents to the bottom of tube.

(3). Carefully pipetting of exact volume is critical to ensure accurate quantification. Please use calibrated pipettes for the assay.

(4). Please perform the assay at room temperature. Equilibrate all kit components to room temperature before use. **DO NOT** hold the tubes for assay in hands for a long time.

(5). The working solution in **Step 4** should be prepared fleshly and used within 3 hours, to avoid fluorescence quenching.

(6). To avoid degradation of RNA standards, use RNA-free consumables for the experiment and place the standards at 2-8 °C after the end of the experiment.