Equalbit RNA BR Assay Kit

EQ212

Version 23.1

Product Description

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 RNA standards. The kit is highly selective for RNA and is not affected by dsDNA. It has an excellent linearity for RNA samples in the range of 20 - 1,000 ng, and can accurately quantify samples of total RNA, rRNA, and mRNA with 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 assay 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. Adjust the shipping method according to the destination.

After initial use, it is recommended to store the Equalbit RNA HS Reagent at room temperature and protect from light; store the Equalbit RNA HS Buffer at room temperature; store the Equalbit RNA HS Standard # 1 & # 2 at 2 ~ 8˚C.

Applications

It is intended for RNA samples from 1 ng/μl to 1,000 ng/μl.

Notes

For research use only. Not for use in diagnostic procedures.

1. Be sure to protect from light due to the fluorescent dye may quench.
2. For detection reagents and RNA standards, please mix by inversion before each use, and then centrifuge briefly for 1 - 2 sec to collect the reagents 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, place 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. To avoid deviation in results caused by fluorescence quenching, be sure to complete the detection of all samples within 3 hours of preparing the working solution.

Machanism & Workflow

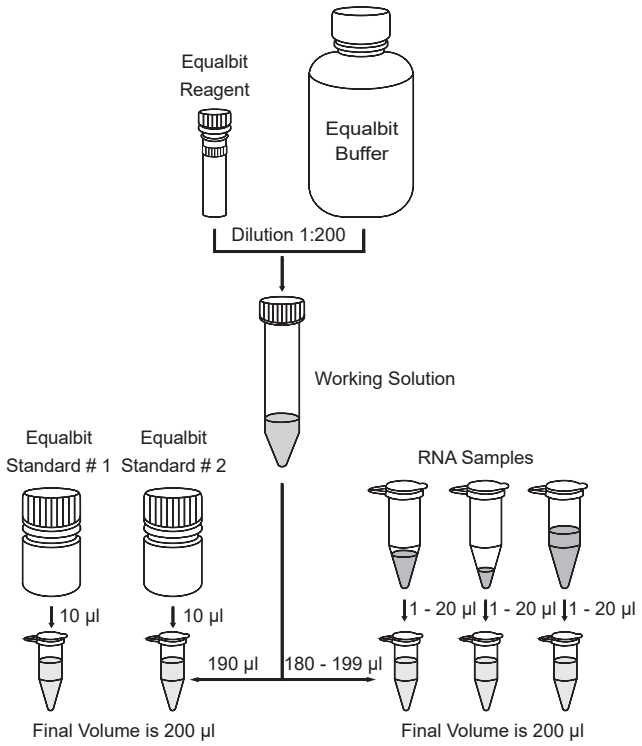

Fig 1. Workfiow of Equalbit RNA BR Assay Kit

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 Qubit assay tubes (Thermo #Q32856) or Axygen PCR-05-C tubes (Axygen #10011-830).
3. Label each PCR tube cap. Do not mark on the side wall of the PCR tube, so as not to affect the collection of fluorescent signals.
4. Take the Equalbit RNA BR Reagent from the kit, and then dilute it with Equalbit RNA BR Buffer at a ratio of 1:200 to prepare the working solution. Please note that the working solution should be freshly prepared for subsequent experiments. Do not prepare the working solution in a glass container.
   ▲ A sufficient amount of detection working solution should be prepared. For example, if there are 7 RNA samples to be detected and two standards, it is recommended to prepare 2 ml of working solution (10 µl of Equalbit RNA BR Reagent plus 1990 µl of Equalbit RNA BR Buffer).
5. Preparation of detection standards. Take 190 µl of working solution into standard PCR tubes, and then add 10 µl of Standard # 1 and Standard # 2 to corresponding standard PCR tubes. Gently vortex for 2 - 3 sec to avoid generating air bubbles. Please make sure that the pipette volume is accurate in this step.
6. Preparation of testing samples. Take 180 - 199 µl of detection working solution into the detection PCR tube, and 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 generating air bubbles.
   ▲ The RNA sample to be tested is added in a volume range of 1 - 20 µl; the detection working solution is added in a volume range of 180 - 199 µl. The final volume in each tube after adding is 200 µl.
7. Place all detection PCR tubes at room temperature and incubate for 2 min in the dark room.
8. According to the operating instructions of the Qubit Fluorometer, select the RNA broad detection program to determine the concentration.