Equalbit RNA HS Assay Kit

EQ211

Version 25.1

Product Description

Equalbit RNA HS (High Sensitivity) 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 4 - 200 ng, allowing accurate quantification of total RNA, rRNA, mRNA concentrations from 200 pg/μl to 200 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	EQ211-01 (100 assays)	EQ211-02 (500 assays)
Equalbit RNA HS Reagent (200 × in DMSO)	250 μl	1.25 ml
Equalbit RNA HS Buffer	50 ml	250 ml
Equalbit RNA HS Standard # 1 (0 ng/μl in TE buffer)	1 ml	5 ml
Equalbit RNA HS Standard # 2 (10 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 200 pg/μl - 200 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 perform 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

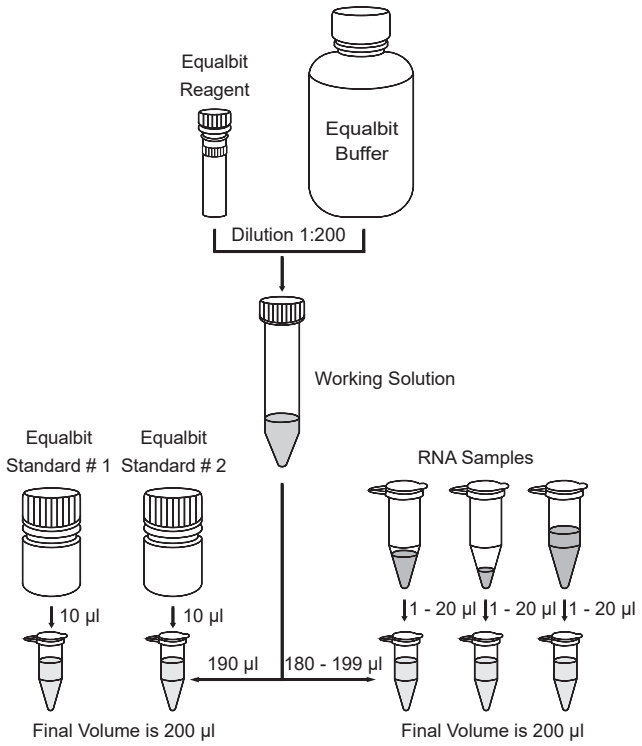

Fig 1. Workflow of Equalbit RNA HS Assay Kit

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 #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 RNA HS Reagent 1 : 200 in Equalbit RNA HS 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 HS Reagent plus 1990 µl of Equalbit RNA HS 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 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 High Sensitivity Detection Program to assay the concentration.