Portelite™ Fluorimetric RNA Quantification Kit *20-1000 ng Broad Range*

Catalog number: 17697
Unit size: 100 Tests

Component	Storage	Amount (Cat No. 17697)
Component A: StrandBrite™ Red RNA BR	Freeze (< -15 °C), Minimize light exposure	1 vial (50 µL,100X in DMSO)
Component B: RNA Assay Buffer	Refrigerated (2-8 °C)	1 bottle (25 mL)
Component C: RNA Standard #1	Freeze (< -15 °C)	1 vial (RNA: 0 ng/uL)
Component D: RNA Standard #2	Freeze (< -15 °C)	1 vial (RNA: 2 mg/mL)

OVERVIEW

The Portelite™ Fluorimetric RNA Quantification Assay Kit offers offers a reliable and efficient solution for measuring RNA across a wide concentration range. Based on a proprietary RNA-selective fluorescent dye, this assay provides superior accuracy and specificity over traditional absorbance-based methods by minimizing interference from non-RNA components.

This kit is optimized for routine RNA analysis and is compatible with a range of RNA sample types including total RNA and mRNA. Its ready-to-use reagents and straightforward protocol simplify RNA quantification, reduce variability, and saves lab time. . Its ready-to-use reagents and straightforward protocol simplify RNA quantification, reduce variability, and save valuable lab time. It is ideal for downstream applications of RNA such as RT-qPCR, RNA-seq, or cDNA synthesis.

AT A GLANCE

Protocol summary

1. Add StrandBrite™ Red RNA BR reagent working solution (200 µL).
2. Add test samples (10 µL).
3. Incubate at room temperature for 5 minutes.
4. Monitor fluorescence intensity in Qubit™ fluorometer using red filter.

Important: The following protocol is provided as an example for quantifying total RNA with StrandBrite™ Red RNA BR. Warm all the components to room temperature before opening. No data are available for the mutagenicity or toxicity of StrandBrite™ Red RNA BR stain. Because this reagent binds to nucleic acids, it should be treated as a potential mutagen and handled with appropriate care. The DMSO stock solution should be handled with particular caution as DMSO is known to facilitate the entry of organic molecules into tissues.

KEY PARAMETERS

Qubit Fluorometer

Emission	665-720 nm
Excitation	635 nm
Instrument specification(s)	0.2 mL PCR vial

PREPARATION OF WORKING SOLUTION

Add 2.5 µL StrandBrite™ Red RNA BR (Component A) into 1 mL of RNA Assay Buffer (Component B) and mix well. Protect the working solution from light by covering it with foil or placing it in the dark.

Note: 1 mL of working solution is enough for 5 tests.

Note: We recommend preparing this solution in a plastic container rather than glass, as the dye may adsorb to glass surfaces. For best results, this solution should be used within a few hours of its preparation.

SAMPLE EXPERIMENTAL PROTOCOL

The acceptable sample volume could range from 1~20 µL depending on the estimated concentration of RNA sample. The recommended sample volume is 10 µL with the RNA concentration in 2~100 ng/µL range. If other sample volume is being used, please adjust the dilution factor in the concentration calculations.

The following protocol is generated based on 10 µL sample volume with the RNA concentration in 2-100 ng/µL range.

1. Add 200 µL StrandBrite™ Red RNA BR working solution into each CytoCite™ sample tube (AAT cat# CCT100) or equivalent 0.2 mL PCR tube.
   Note: Use thin-wall, polypropylene, clear 0.2 mL PCR tubes such as AAT cat# CCT100.
2. Add 10 µL RNA standard #1 and #2 or test samples into each tube, and then mix by vortexing 2~3 seconds.
3. Incubate all tubes at room temperature for 2 minutes.
4. Insert the samples into Qubit™ and monitor the fluorescence with red fluorescence channel.

Preparation of standard calibration curve (optional):

For StrandBrite™ assays, you have the choice to make a calibration curve with the RNA standards. Here is a brief protocol to generate a customized RNA standard curve:

1. Perform dilution of 2 mg/mL RNA standard (Component D) to 100, 80, 60, 40, 20, 10, 5, 2 ng/uL in RNA Assay Buffer (Component B).
2. Add 200 µL StrandBrite™ Red DNA BR working solution into each tube.
3. Add 10 µL RNA standards or test samples into each tube, and then mix by vortexing 2-3 seconds.
4. Incubate the reaction at room temperature for 2 minutes.
5. Insert the samples into Qubit™ and monitor the fluorescence with red fluorescence channel.

EXAMPLE DATA ANALYSIS AND FIGURES

We recommend using the Online Linear Regression Calculator which can be found at:

https://www.aatbio.com/tools/linear-logarithmic-semi-log-regression-onlinecalculator/

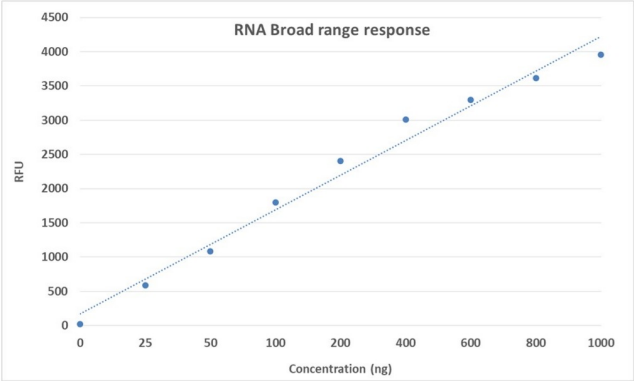

Figure 1. RNA dose response generated with StrandBrite™ Fluorimetric RNA Quantitation Assay Kit *Broad Range*.

DISCLAIMER

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