

Product Information

RNA Quantitation Kit

Catalog Number: TBD

For use with handheld fluorimeters such as the FluoroVerse™

Kit Contents

Component	200 assays	1000 assays
RNA Broad Range Dye, 200X	1 x 200 uL	1 x 1 mL
RNA Broad Range Buffer	1 x 50 mL	x 250 mL
RNA Broad Range Standard, 100 ng/uL	x 300 uL	x 300 uL
RNA Dilution Buffer	T 1 x 1 mL	1 x 5 mL

Storage and Handling

Dye and buffer components may be stored at 4°C. The RNA standard should be stored at -20°C or below. Storage at -80°C will extend the shelf life of the RNA standard. Protect RNA Broad Range Dye from light. The kit is stable for at least 6 months from date of receipt when stored as recommended. RNA Broad Range Dye is a potentially harmful chemical. Exercise universal laboratory safety precautions when handling the dye, and dispose of the dye as hazardous chemical waste according to your local regulations.

Spectral Properties

Ex/Em: 650/670 nm (with RNA). See Figure 1 for spectra.

Product Description

The RNA Quantitation Kit is a fluorescence-based assay designed to quantify purified RNA samples. The assay is linear between 5 and 1000 ng of RNA per 200 uL assay well (see Figure 2), which corresponds to sample concentrations of 0.5 to 100 ng/uL. It is ideal for use in quantifying RNA for sensitive applications such as Next-Gen Sequencing (NGS) or reverse transcription PCR (RT-PCR). Unlike absorbance-based measurements, RNA Broad Range Dye is highly selective for RNA over double-stranded DNA and can tolerate an equimolar amount of dsDNA in the sample without significant effect on RNA quantitation (Figure 3). Purified RNA samples are still recommended. The assay may also be used to quantitate small RNAs such as miRNA (Figure 5), as well as single-stranded DNA (ssDNA), though ssDNA gives a lower fluorescence signal compared to RNA (Figure 4). The assay shows very low signal with dsRNA compared to total RNA (Figure 6).

The RNA Quantitation assay is optimized for use in the FluoroVerse™ from OMEC Medical, using the pre-programmed RNA Broad Range program.

Assay Considerations

- The RNA Standard used in this kit is made from total mammalian cell RNA. When quantifying RNA from non-mammalian sources, it may be preferable to use an RNA standard similar in size or source to your unknown samples.
- When using this kit, precautions should be taken to avoid contamination with RNases. RNase contamination of the RNA Standard or other kit components may result in errors with the quantitation. We suggest using nuclease-free tubes and filter tips.
- It is recommended to test each RNA standard and each unknown sample in triplicate for best accuracy.

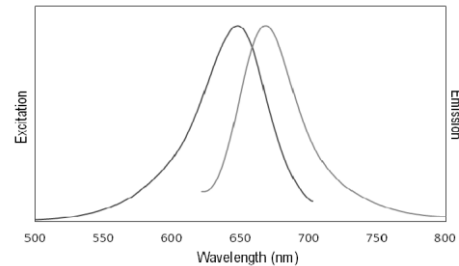


Figure 1. Excitation and emission spectra of RNA Broad Range Dye bound to RNA.

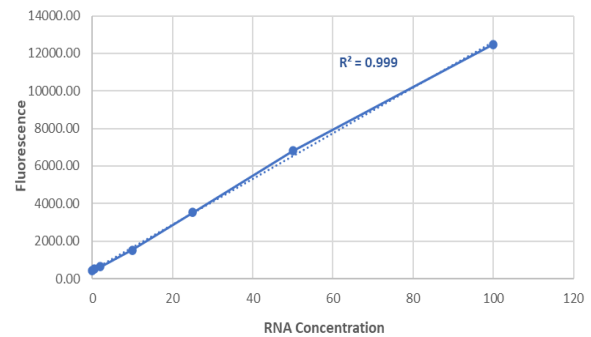


Figure 2. Linearity of Broad Range RNA Quantitation assay as measured in the FluoroVerse™

Please visit our website at www.omecmedical.com for information on our life science research products including DNA quantitation kits, and other reagents for molecular and cell biology research.

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