

ABQubit dsDNA HS Assay Kit

Catalog: RK30140

Size: 100 RXN / 500 RXN

Components:

Component	100 RXN	500 RXN	Concentration	Storage
ABQubit Concentrated Solution	250 μ L	1.25 mL	200X in organic solvent	2-8°C Protect from light and moisture
ABQubit 1X Buffer	50 mL	250 mL	1X buffer	2-8°C
ABQubit dsDNA Standard 1	1 mL	5 mL	0 ng/ μ L	2-8°C
ABQubit dsDNA Standard 2	1 mL	5 mL	10 ng/ μ L	2-8°C

Product Description

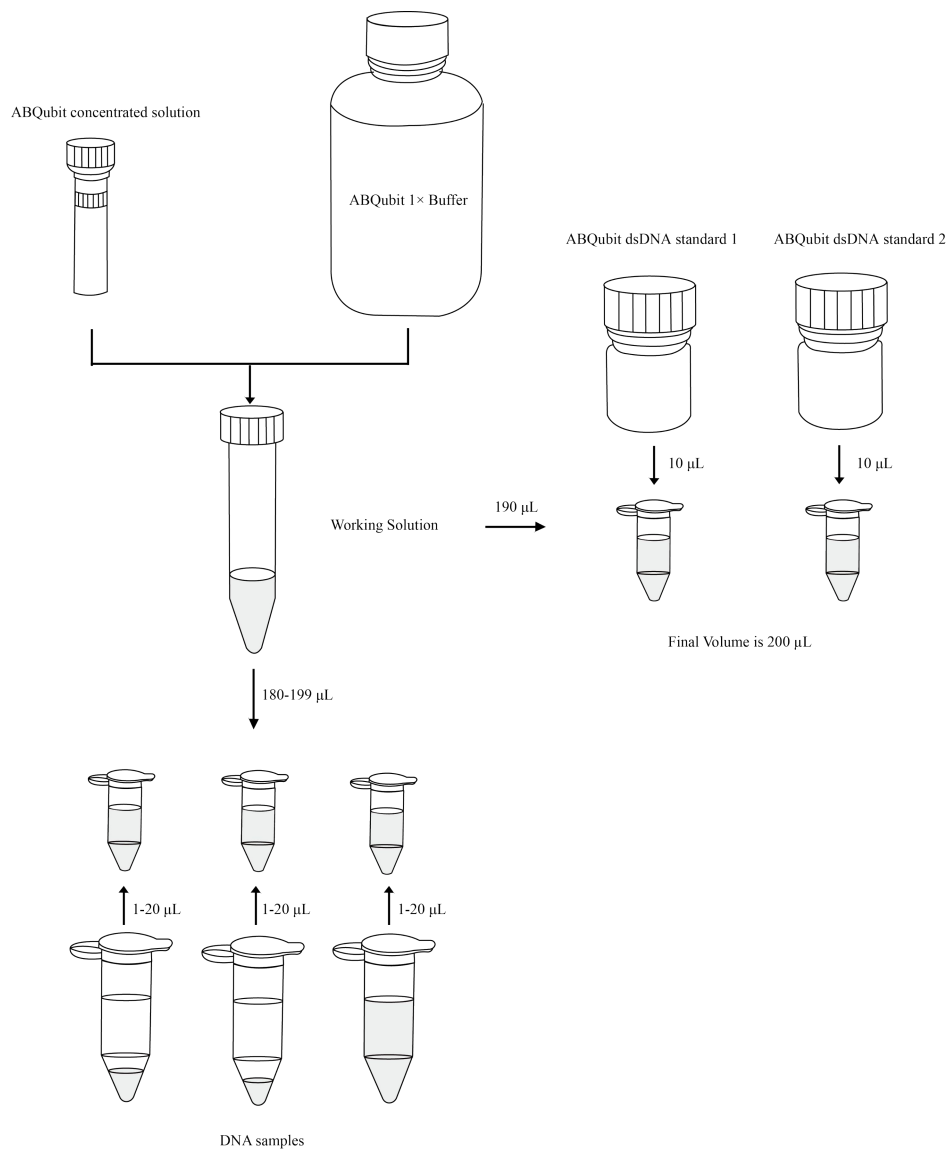
Accurately detect and quantify dsDNA using the ABQubit dsDNA HS Assay Kit. The product provides selective and sensitive detection of various dsDNA samples and PCR products, as well as quantification of input DNA and DNA libraries in NGS. Unlike methodologies which rely upon UV absorbance for detection, the ABQubit kit relies upon fluorescence that is selective to dsDNA, decreasing the effects of sample contaminants such as salts, solvents, detergents, proteins, RNA, ssDNA, and free nucleotides upon final quantification results. Fluorescence measurements via the ABQubit dsDNA HS Assay Kit have greater sensitivity than conventional DNA quantification methods, precisely detecting dsDNA at concentrations ranging between 10 pg/ μ L to 100 ng/ μ L ($R^2 > 0.99$). A Qubit Fluorometer can read dsDNA concentration immediately upon addition of the provided diluted reagent and buffer to a sample.

Storage

Store the kit at 2-8°C. Protect ABQubit Concentrate Solution from light. After the initial use, ABQubit Concentrate Solution and ABQubit 1X Buffer are stable for storage at room temperature.

Experimental Method

Workflow



1. Reagent Preparation

The ABQubit Concentrated Solution contains organic solvent. Limit exposure to light, which can degrade the ABQubit Concentrated Solution. To prepare a 1X Working Solution, dilute ABQubit Concentrated Solution in ABQubit 1X Buffer at a ratio of 1:199 (e.g. add 100 μL of ABQubit Concentrated Solution to 19.9 mL of ABQubit 1X Buffer). Prepare the 1X Working Solution in a clean plastic container prior to each assay. Do NOT prepare in glass containers.

2. Instructions

1. Prepare sufficient 0.5 mL EP tubes for use with the Qubit.

Note: The EP tubes used by Qubit are transparent and thin-walled. Label tube lids only. Labels on the side walls of the tube will interfere with fluorescence signal acquisition.

2. Prepare standard curves. Label two EP tubes Standard 1 and Standard 2. To each tube, add 190 μ L 1X working solution; add 10 μ L ABQubit dsDNA Standard 1, or ABQubit dsDNA Standard 2, to the appropriate EP tube as labeled. Vortex each diluted standard briefly. Avoid creating bubbles.

3. Starting volume of samples should be between 1-20 μ L. Adjust each sample to a final volume of 200 μ L using 1X Working Solution (see Reagent Preparation) and vortex briefly to mix. Avoid creating bubbles.

4. While protecting from light, incubate the prepared standards and sample(s) at room for 2 minutes. After incubation, samples are stable at room temperature for up to 3 hours if protected from light.

5. This kit is designed for use with the dsDNA Highly Sensitive Detection Program on the Qubit Fluorometer. Refer to the Qubit Fluorometer User Guide for a detailed protocol on reading standards and samples. Ensure that standards and samples are inserted into the sample detection wheel in the correct order for reading as indicated by the program.

6. A fresh calibration of the Qubit Fluorometer, using the two prepared standards, is recommended to generate a standard curve.

6. Read the dsDNA concentration of the prepared sample(s). Multiple readings can be taken for each sample, but care should be taken to avoid samples from remaining in the Qubit Fluorometer for prolonged periods, as extended time in the Qubit Fluorometer can raise the temperature of samples and affect readings.

Precautions

1. Protect fluorescent dye from light to prevent degradation.

2. A fresh 1X Working Solution should be prepared prior to each assay and used immediately after preparation to ensure best results. Discard unused solution.

3. Recommended PPE: For your safety and health, please wear a lab coat and disposable gloves.