Equalbit dsDNA HS Assay Kit

Catalog # EQ111

Version 7.1

Vazyme biotech co., ltd.

1. Introduction

The Equalbit dsDNA HS (High Sensitivity) Assay Kit is a simple, sensitive, and accurate double-stranded DNA (dsDNA) fluorescence quantitative detection kit. This kit contains fluorescence detection reagents, buffers, and dsDNA standards. This kit is highly selective for double-stranded DNA and is not subject to RNA. It has an excellent linearity between 0.2 ng and 100 ng for dsDNA samples, providing accurate quantification of samples from 10 pg / μl to 100 ng / μl. This kit has excellent resistance for most conventional pollutants, including salt, free nucleotides, proteins, solvents, and detergents.

The Equalbit dsDNA HS (High Sensitivity) Assay Kit is easy to operate, and the assay can be performed at room temperature. Before use, please dilute the fluorescence detection reagent with buffer into a working solution, and then add the dsDNA sample for detection by a Qubit® fluorometer.

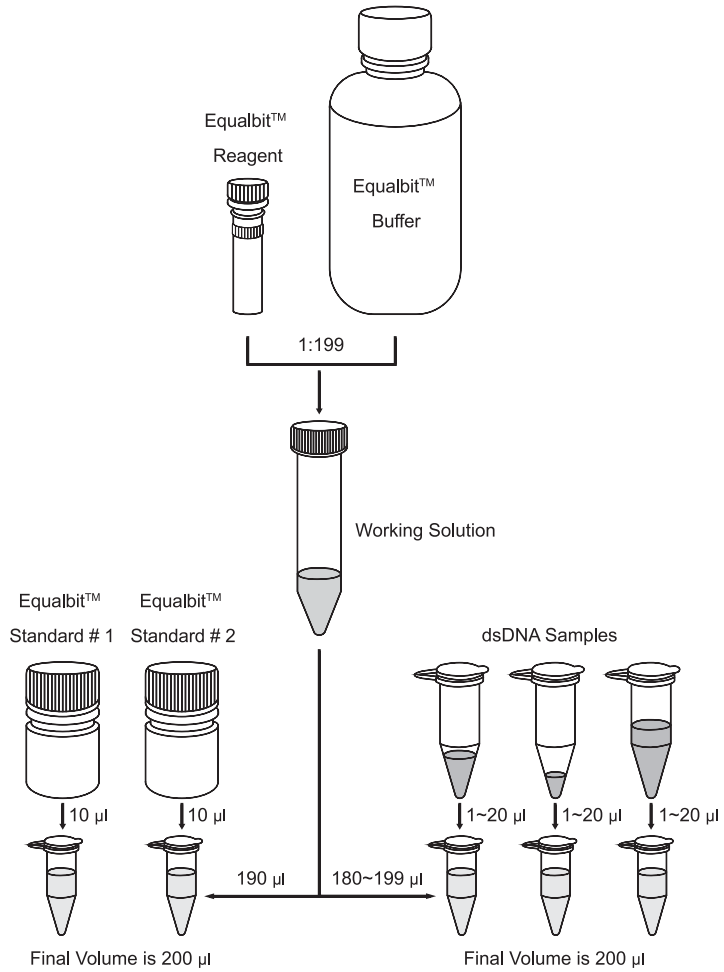
2. Contents of Kits

Components	EQ111-01 (100 rxn)	EQ111-02 (500 rxn)
Equalbit dsDNA HS Reagent (200× in DMSO)	250 μl	1.25 ml
Equalbit dsDNA HS Buffer	50 ml	250 ml
Equalbit dsDNA HS Standard #1 (0 ng/μl in TE buffer)	1 ml	5 ml
Equalbit dsDNA HS Standard #2 (10 ng/μl in TE buffer)	1 ml	5 ml

3. Storage

The intact kit should be stored at 2-8℃ for up to 6 months. Protect from light and avoid repeated freeze-thaw cycles.
After the first use, it is recommended to store the Equalbit dsDNA HS Reagent at room temperature and protect from light, store the Equalbit dsDNA HS Buffer at room temperature, and store the Equalbit dsDNA HS Standard #1 and #2 at 4℃.

4. Workflow Overview



5. Protocol

Note: This protocol is only suitable for Qubit® 2.0 and Qubit® 3.0 fluorimeters.

(1). Equilibrate all kit components to room temperature before use.

(2). Prepare sufficient 0.5-ml PCR tubes to accommodate all samples and standards.

Note: Only 0.5ml PCR tubes are suitable for detection. It is recommended to use Qubit® assay tubes (Cat. No.# Q32856) or Axygen® PCR-5-C tubes (Cat. No.# 10011-830).

(3). Label the lid of each tube. **DO NOT** label on the side wall, in order to avoid any possible interference in fluorescence signal acquisition.

(4). Prepare fresh working solution of Equalbit dsDNA HS Reagent, by diluting it in Equalbit dsDNA HS Buffer according to a ratio of 1 : 200. **DO NOT use glass containers for the preparation of working solution**.

Note: A sufficient amount of working solution should be prepared to accommodate all samples and standards. For example, to accommodate 7 dsDNA samples and 2 standards, it is needed to prepare 2 ml of working solution by adding 10 µl of Equalbit dsDNA HS Reagent to 1990 µl of Equalbit dsDNA HS Buffer. Mix thoroughly by vortexing.

(5). Prepare standards. Load 190 µl of working solution to each tube used for standards, then carefully add exactly 10 µl of Standard #1 and Standard #2 to the corresponding tube, respectively. Gently vortex for 2-3 sec to avoid bubbles. Make sure the exact pipetting of 10 µl.

(6). Prepare samples. For each tube used for samples, add 180 µl - 199 µl of working, and then carefully add 1 µl - 20 µl of dsDNA sample. Make sure the final volume in each tube is 200 µl. Gently vortex for 2-3 sec to avoid bubbles.

(7). Incubate at room temperature for 2 min. Protect from light.

(8). Load the sample tubes into a Qubit® Fluorometer and test the sample concentration by performing the dsDNA High Sensitivity Detection Program.

6. Application Notes

(1). Protect from light during storage and assay to avoid quenching of fluorescent dyes.

(2). For all reagent and standards in this kit, please mix thoroughly before use by gently inverting tube. Centrifuge for 1-2 sec to collect the reagents to the bottom of tube.

(3). Carefully pipetting of exact volume is critical to ensure accurate quantification. Please use calibrated pipettes for the assay.

(4). Please perform the assay at room temperature. Equilibrate all kit components to room temperature before use. **DO NOT** hold the tubes for assay in hands for a long time.

(5). The working solution in **Step 4** should be prepared fleshly and used within 3 hours, to avoid fluorescence quenching.