Product Information

Qbtest™ X-Green II dsDNA Quantitation Kit Plus

Catalog Number: Q2038S, Q2038L

Product Size:100T, 500T

Component \ Size	Q2038S（100T）	Q2038L（500T）	Concentration	Store
Qbtest™ X-Green II（Component A）	250 μL	1.25 mL	Soluble in organic solvents	2-6℃ Dry and protect from light
Qbtest™ 1× Buffer（Component B）	50 mL	250 mL	1× Buffer	2-6℃
Qbtest™ dsDNA Standard solution 1（Component C）	1 mL	5 mL	0 ng/μL	2-6℃
Qbtest™ dsDNA Standard solution 2（Component D）	1 mL	5 mL	10 ng/μL	2-6℃

Parameters

Ex/Em: 480/520 nm（binding dsDNA）

Storage

Store at 4°C and protect from light, Long-term storage can be stored at -20ºC. Expiration date marked on the outer packing.

Description

Qbtest™ X-Green II dsDNA Quantitation Kit Plus is sensitive fluorescence detection method which can be used to quantify the dsDNA. In molecular biology, it is commonly used in the construction of cDNA library and the purification and application of subcloned DNA fragments, such as DNA quantification, product amplification and further detection of primers. The conventional DNA content detection method is to measure its absorbance at 260 nm.

The main disadvantage of this method is that nucleotides, single-stranded nucleic acids and proteins have a great influence on the signal, and they are also interfered by contaminants in the nucleic acid preparation process.Unable to distinguish between DNA and RNA, and the sensitivity is low (5 μg/mL dsDNA A_{260}=0.1).

Qbtest™ X-Green II emits fluorescence only after binding dsDNA, and the fluorescence intensity is proportional to the DNA concentration. Qbtest™ X-Green II dsDNA Quantification Kit Plus can detect dsDNA in the range of 10 pg/μL-100 ng/μL, and the linear relationship is good (R^2>0.99). The kit can be used for Qubit and can replace imported similar products.

Protocol

1. Reagent preparation

Qbtest™ X-Green II is stored in organic solvents as a concentrated solution. Prepare working solution: 1× Qbtest™ X-Green II working solution.Dilute component A with component B at a ratio of 1:200, such as adding 100 μL of component A to 20 mL of component B. Since the reagent is easily adsorbed to the glass surface, it needs to be prepared in a

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plastic container. Qbtest™ X-Green II reagent is easily degraded when exposed to light, so please keep it away from light.

2. Method

(1) Prepare a sufficient amount of 0.5 mL Ep tube for Qubit instrument.

Note: The Ep tube for Qubit instrument is a transparent thin-walled. Do not mark the side of the Ep tube to avoid affecting the fluorescence value collection.

(2) Make a standard curve. Prepare two Ep tubes, add 190 μL of the prepared 1× Qbtest™ X-Green II working solution to each tube, then add 10 μL component C to one tube and component D to other one, vortex for 2-3 s. Do not produce bubbles during the shaking process.

Note:Make sure that the final volume is 200 μL.

(3) Add a certain volume of 1× Qbtest™ X-Green II working solution to the test sample, make sure that the final volume is 200 μL.

Note: Generally, the volume of the added sample is 1-20 μL, correspondingly add 1× Qbtest™ X-Green II working solution is 199-180 μL.

(4) Incubate for 2 min at room temperature. Read the data, generate a standard curve, and calculate the concentration of DNA in the sample.

Notes

1. Please try to avoid light to slow down the quenching of fluorescence.

2. 1× Qbtest™ X-Green II working solution is prepared when used to ensure the best results.

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