

Product Information

AccuGreen™ High Sensitivity dsDNA Quantitation Kit

For use with handheld fluorometers such as the Qubit®

Catalog Number:

31066-T AccuGreen™ High Sensitivity dsDNA Quantitation Kit (100 assays)
31066 AccuGreen™ High Sensitivity dsDNA Quantitation Kit (500 assays)

Kit Contents

Component	31066-T 100 assays	31066 500 assays
AccuGreen™ Dye, 200X	250 uL 99817-T	1.25 mL 99817
AccuGreen™ Buffer, 1X	50 mL 99818-T	250 mL 99818
AccuGreen™ Standard 1, 0 ng/uL	1 mL 99819-T	5 mL 99819
AccuGreen™ Standard 2, 10 ng/uL	1 mL 99820-T	5 mL 99820

Reagents to be supplied by user

0.5 mL clear PCR tubes

Storage and Handling

Store kit at 4°C. Protect Dye from light. The kit is stable for at least 6 months from date of receipt when stored as recommended. AccuGreen™ 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: 509/530 nm (bound to dsDNA). See Figure 1 for spectra.

Product Description

The AccuGreen™ High Sensitivity dsDNA Quantitation Kit is designed for use with handheld fluorometers such as the Qubit® fluorometer from Thermo Fisher. The AccuGreen™ assay is linear between 0.1 and 100 ng of dsDNA per assay, which corresponds to sample concentrations of 10 pg/uL to 10 ng/uL. Unlike absorbance-based measurements, AccuGreen™ Dye is highly selective for double-stranded DNA over single-stranded DNA or RNA.

The AccuGreen kits provide enough reagents to quantify approximately 100 (31066-T) or 500 (31066) samples, plus the two standards. Including the standards, there are enough reagents for 250 reactions (31066-T) or 1,250 reactions (31066).

For high-sensitivity DNA quantitation using a fluorescent plate reader, we recommend using our AccuClear™ or AccuBlue™ dsDNA Quantitation Kits. The AccuClear™ assay (31028) combines excellent sensitivity and the broadest linear range. The AccuBlue™ NextGen assay (31060) provides unprecedented sensitivity and accuracy.

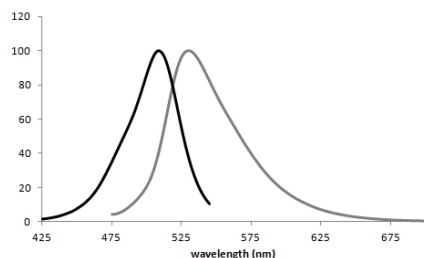


Figure 1. Absorbance and emission spectra of AccuGreen™ Dye bound to dsDNA.

Protocol for reading the AccuGreen™ assay on the Qubit® Fluorometer

This protocol describes how to measure AccuGreen™ fluorescence on a Qubit® 3.0 Fluorometer using the pre-programmed dsDNA High Sensitivity program. Instructions may vary for older Qubit® models.

Note: The linear range for this assay on the Qubit® 3.0 is 100 pg-100 ng DNA in the assay tube (corresponding to sample concentrations of 10 pg/uL-10 ng/uL). However, samples even slightly below 10 pg/uL will return the error message "Out of Range". Therefore for best results you should use samples above 10 pg/uL.

1. Warm all components to room temperature before use. AccuGreen™ Dye is provided in DMSO, which may freeze during storage at 4°C. You can place all kit components in a 37°C water bath for rapid warming; be sure to allow solutions to cool to room temperature before using.
2. Prepare the 1X working solution by diluting 200X AccuGreen™ Dye 1:200 in AccuGreen™ Buffer. You will need 200 uL of working solution for each standard and sample to be tested. For example, to quantify three DNA samples, you will need 1 mL of working solution (2 standards and 3 samples).
3. For each sample and standard, pipette 190 uL of the working solution into a clear 0.5 mL PCR tube (if using the Qubit® fluorometer).
4. Into one tube, pipet 10 uL of AccuGreen™ Standard 1 (0 ng/uL).
5. Into a second tube, pipet 10 uL of AccuGreen™ Standard 2 (10 ng/uL).
6. Pipette 10 uL of each DNA sample to be quantified into its own tube.
7. Incubate the tubes at room temperature for at least 2 minutes.
8. Turn on the Qubit™ 3.0 instrument. On the home screen select dsDNA. Choose the High Sensitivity assay.
9. Follow the prompts on the screen, and first read the AccuGreen™ Standard 1 and then the AccuGreen™ Standard 2. The program will use these values to quantify your unknown samples.
10. One at a time, measure each of your samples.
11. The data can be recorded manually or exported as a csv file.

Related Products

Catalog number	Product
31060-T	AccuBlue™ NextGen dsDNA Quantitation Kit (200 assays)
31028-T	AccuClear™ Ultra High Sensitivity dsDNA Quantitation Kit with 7 DNA Standards (200 assays)
31007-T	AccuBlue™ Broad Range dsDNA Quantitation Kit with 9 DNA Standards (200 assays)
41003	GelRed™ Nucleic Acid Gel Stain, 10,000X in water
31041-T	Forget-Me-Not™ qPCR Master Mix, trial size
31043-T	Forget-Me-Not™ Universal Probe Master Mix, trial size

Please visit our website at www.biotium.com for information on our life science research products, including environmentally friendly EvaGreen® qPCR master mixes, fluorescent CF™ dye antibody conjugates and reactive dyes, apoptosis reagents, fluorescent probes, and kits for cell biology research.

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