Operation Manual

Version 1.0

MBI ssDNA Quantitation Kit

MBI ssDNA Quantitation Kit

Cat.No.	Product name	Unit size	Application field	Assay range
MBIQR-EK9092	MBI dsDNA HS Quantitation Kit	100 assays	For research use only	0.1-100 ng

The MBI ssDNA Quantitation Kit provides a simple, sensitive, and accurate quantitation for ssDNA. The Kits include concentrated assay reagent, dilution buffer, and pre-diluted ssDNA standards. The assay kit is highly sensitive and selective for ssDNA due to fluorescence dye high quantum yield and large molar extinction coefficient. The kit offers advantages in stability, linear dynamic range, and sensitivity over other traditional of ssDNA quantitation. The assay is performed at room temperature. The reagent simply is diluted using the buffer provided, added your sample (any volume between 1 μL and 20 μL is acceptable), and the fluorescence is read using MBI Fluo-100 Fluorometer.

Contents and Storage

Material	Storage	Amount	Concentration
MBI ssDNA Reagent (component 1)	4 ℃ Protect from light	100 μL	200 X in DMSO
MBI ssDNA Buffer (component 2)	Room temperature	25 mL	1 X
MBI ssDNA Standard #1 (component 3)	4 ℃	200 μL	0 ng/μL
MBI ssDNA Standard #2 (component 4)	4 ℃	200 μL	10 ng/μL
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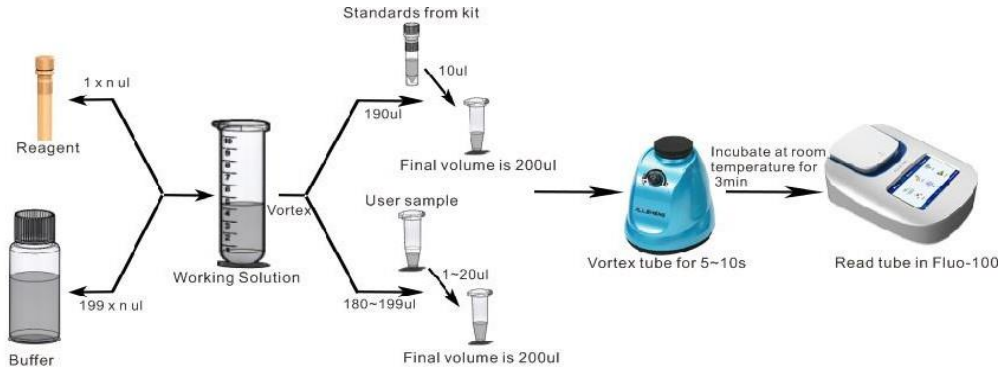
0.5 mL PCR tube		50 per	

General Protocol

2.1 Preparation of reagent

1) Warm up MBI ssDNA quantitation Kit to room temperature. Check the MBI ssDNA reagent for any precipitation. If precipitation is seen, warm up the vial in a water bath and vortex until dissolved.

2) Prepare the MBI working solution by diluting the MBI ssDNA reagent 1:200 in 1×MBI ssDNA buffer. Use a clean plastic tube each time to make MBI working solution. For example, to measure 8 samples in duplicate, add 10 μL of MBI ssDNA reagent to 1990 μL of MBI ssDNA Buffer. Mix well and use **IMMEDIATELY**.



2.2 Calibration of standard curve

1) Add 190 μL of the MBI working solution to each assay tube. (Note: Use only thin-wall, clear 0.5 mL PCR tubes for fluorescence analysis. Acceptable tubes include MBI PCR tubes or Axygen PCR-05-C tubes.

2) Add 10 μL of ssDNA standard #1 (Component 3), ssDNA standard #2 (Component 4), and mix by vortexing 5-10 seconds, and incubate all tubes at room temperature for 2 minutes in the dark. **Note:** When mixing ssDNA standard and working solution, please disperse the bubbles before analysis.

3) Select the Blue module of Fluo-100 fluorometer, and measure the fluorescence using calibration program of standard curve.Click oligo in the **Home** interface, select **Curve ID: ssDNA-01**, and press **Calibration**. The tubes of ssDNA standard #1 and standard #2 were placed in the instrument and detected. After calibration, please click the **Back** button and **save the data**.

2.3 Sample analysis

1) Add the sample (any volume between 1 μL and 20 μL is acceptable) and the MBI working solution, and the final volume in each tube should be 200 μL.

2) Mix by vortexing 5-10 seconds, and incubate all tubes at room temperature for 3 minutes in the dark. **Note:** When mixing ssDNA standard and working solution, please disperse the bubbles before analysis.

3) Click **ssDNA** in the **Home** interface, enter **Detecting** and input the sample volumes. Tubes of ssDNA samples were placed in the instrument and detected.

$$The\ concentration\ of\ sample\ (ng/\mu L) = The\ sample\ concentration\ of\ PCR\ tube\ (ng/\mu L) \times \frac{200\mu L}{The\ sample\ volume(\mu L)}$$

Version Modification Records:

Version	Date	Description on the Modification
V1.0	2020.04.13	➢ Initial Release Version

Thanks for purchasing our products. Please keep operation manual well for further use.