



## **Plasmid Residual DNA Detection Kit**

Plasmid Residual DNA Detection Kit is designed to detect residual Plasmid Residual DNA in biological products during production.

Catalog number: ARG83100

Package: 100 tests

## **TABLE OF CONTENTS**

<b>SECTION</b>	<b>Page</b>
INTRODUCTION .....	3
PRINCIPLE OF THE ASSAY .....	3
MATERIALS PROVIDED & STORAGE INFORMATION.....	4
MATERIALS REQUIRED BUT NOT PROVIDED.....	4
TECHNICAL HINTS AND PRECAUTIONS .....	4
ASSAY PROCEDURE .....	5
EXAMPLE OF TYPICAL STANDARD CURVE.....	5

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### **INTRODUCTION**

Plasmid Residual DNA Detection Kit is designed for the quantitative detection of residual plasmid DNA in intermediates, semi-finished products and finished products of various biological products. Plasmid DNA content in samples (e.g., lentivirus, adenovirus) is detected by analyzing the consensus sequence.

This kit uses TaqMan fluorescence probe principle, with strong specificity, high sensitivity and reliable performance.

### **PRINCIPLE OF THE ASSAY**

Plasmid Residual DNA Detection Kit is a test kit that uses quantitative polymerase chain reaction (qPCR) technology to detect residual Plasmid DNA.

Plasmid Residual DNA Detection Kit includes a set of primers and probes that can amplify and detect specific sequences of Plasmid DNA. qPCR is a PCR technique that simultaneously amplifies and detects DNA by monitoring the accumulation of product with the use of a fluorescent dye. This kit has high specificity and sensitivity, is easy to use, and suitable in laboratories.

## Plasmid Residual DNA Detection Kit ARG83100

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### MATERIALS PROVIDED & STORAGE INFORMATION

Store the unopened kit at -20 °C. Use the kit before expiration date.

Component	Quantity	Storage information
Plasmid DNA Standard (A-F) A: 4X10 <sup>1</sup> (copies/μl) B: 4X10 <sup>2</sup> (copies/μl) C: 4X10 <sup>3</sup> (copies/μl) D: 4X10 <sup>4</sup> (copies/μl) E: 4X10 <sup>5</sup> (copies/μl) F: 4X10 <sup>6</sup> (copies/μl)	6 X 300 μl	-20°C
Plasmid Primer & probe mix	550 μl	-20°C (protect from light)
2x qPCR Reaction Buffer	1.6 ml	-20°C
DNA Dilution buffer	3 x 1 ml/vials	-20°C

### MATERIALS REQUIRED BUT NOT PROVIDED

- PCR machine
- Pipettes and pipette tips
- DNase/RNase-Free Water
- PCR tube

### TECHNICAL HINTS AND PRECAUTIONS

- Wear protective gloves, clothing, eye, and face protection especially while handling blood or body fluid samples.
- Store the kit at -20°C at all times.
- All reagents must be kept on ice during the entire experiment.
- Once the assay has been started, all steps should be completed without interruption.
- It is highly recommended that the standards and samples be assayed in

## Plasmid Residual DNA Detection Kit ARG83100

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triplicates.

- Change pipette tips between the addition of different reagent or samples.

### ASSAY PROCEDURE

- 1 Prepare qPCR mix buffer:

2x qRCR Reaction Buffer	15 $\mu$ l
Plasmid Primer and probe mix	5 $\mu$ l
<b>Total</b>	<b>20 <math>\mu</math>l (1 wells)</b>

- 2 Mix 20 $\mu$ l qPCR mix buffer with 10 $\mu$ l standard (A-F) / sample / blank in PCR tube. The final volume should be 30  $\mu$ l.
- 3 Decontamination: 50°C, 2 min.
- 4 Initial denaturation: 95°C, 20s.
- 5 PCR cycle:  
95°C, 3 sec; 60°C, 30 sec, for **40 cycle, 30  $\mu$ l**.

### EXAMPLE OF TYPICAL STANDARD CURVE

The following data is for demonstration only and cannot be used in place of data generations at the time of assay.

