E.coli Residual DNA Detection Kit

E.coli Residual DNA Detection Kit is designed to detect residual *E.coli* DNA in biological products during production.

Catalog number: ARG83091

Package: 100 tests

TABLE OF CONTENTS

MANUFACTURED BY:

Arigo Biolaboratories Corporation

Address: No. 22, Ln. 227, Gongyuan Rd., Hsinchu City 300, Taiwan

Phone: +886 (3) 562 1738

Fax: +886 (3) 561 3008

Email: info@arigobio.com

INTRODUCTION

E.coli Residual DNA Detection Kit is designed for the quantitative detection of *E.coli* host cell DNA in intermediates, semi-finished products and finished products of various biological products.

E.coli Residual DNA Detection Kit adopts the principle of Taqman probe to quantitatively detect *E.coli* residual DNA in samples. The kit is a rapid, specific and reliable device, with the minimum detection limit reaching fg level.

PRINCIPLE OF THE ASSAY

E.coli Residual DNA Detection Kit is a test kit that uses quantitative polymerase chain reaction (qPCR) technology to detect residual *E.coli* DNA. *E.coli* Residual DNA Detection Kit includes a set of primers and probes that can amplify and detect specific sequences of E.coli 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.

MATERIALS PROVIDED & STORAGE INFORMATION

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

Component	Quantity	Storage information
10x *E.coli* DNA standard	50 µl	-20°C
E.coli Primer and probe mix	550µl	-20°C (protect from light)
2x qRCR Reaction Buffer	1.1 ml	-20°C (protect from light)
DNA Dilution buffer	3 x 1 ml/vails	-20°C
ROX (High)	50µl/vails	-20°C (protect from light)
ROX (Low)	50µl/vails	-20°C (protect from light)

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

REAGENT PREPARATION

- **Standards**: Dilute 10x *E.coli* DNA standard with DNA Dilution buffer to yield a S5 concentration of 300 pg/µl. The DNA Dilution buffer serves as zero standard (0 pg/ml), and the rest of the standard 10-fold serial

Dilute *E.coli* DNA standard as according to the table below:

Standard	DNA Conc.	µl of DNA Dilution buffer	µl of standard
S5	300 pg/µl	90 µl	10 µl (stock)
S4	30 pg/µl	90 µl	10 µl (S5)
S3	3 pg/µl	90 µl	10 µl(S4)
S2	0.3 pg/µl	90 µl	10 µl(S3)
S1	0.03 pg/µl	90 µl	10 µl(S2)
S0	0 pg/µl	0 µl	100µl

- **Sample**: The suggested concentration of the sample is 30 ng/µl.

ASSAY PROCEDURE

1 Prepare qPCR mix buffer:

2x qRCR Reaction Buffer	10µl
E.coli Primer and probe mix	4.6µl
ROX *	0.4µl
Total	**15µl (1 wells)**

∗ Choose the appropriate ROX (High or Low) to match the PCR machine. If the PCR machine does not require ROX, adjust the volume with DNase/RNase-free water to obtain a final volume of 15µl.

2 Mix 15µl qPCR mix buffer with 5µl diluent standard / sample / blank in PCR tube. The final volume should be 20 µl.

3 Initial denaturation: 95°C, 10 min

4 PCR cycle:

Denaturation: 95°C, 15 sec

Elongation: 60°C, 1 min, for **40 cycle** and select fluorescent FAM.