# Human Residual DNA Detection Kit

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

Catalog number: ARG83095

Package: 100 tests

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## INTRODUCTION

Human Residual DNA Detection Kit is designed for the quantitative detection of the Human host cell DNA in intermediate, semi-finished and finished products of various biological products.

Human Residual DNA Detection Kit adopts the principle of the Taq-man probe to quantitatively detect Human residual DNA in samples. Human Residual DNA Detection Kit a rapid, specific and reliable device, with the minimum detection limit reaching fg level.

## PRINCIPLE OF THE ASSAY

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

Human Residual DNA Detection Kit includes a set of primers and probes that can amplify and detect specific sequences of Human 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 Human DNA Standard | 50 µl (30 ng/ml) | -20°C |
| Human Primer & 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 Human 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 Human 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 |
| Human 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, 10 sec

Elongation: 60°C, 15 sec, for **40 cycle, 20 µl.**