

resDNASEQ Human Residual DNA Quantitation System

Integrated sample preparation and real-time PCR assay for quantitation of human host-cell DNA

- Highly sensitive quantitation using proven Applied Biosystems™ TaqMan® real-time PCR technology
- Manual and automated sample preparation, optimized for quantitative recovery from complex sample matrices (Table 1)
- Integrated sample-to-results system, with sample preparation kit, master mix, TaqMan primer/probe mix, and genomic DNA (gDNA) standard



The Applied Biosystems™ resDNASEQ™ Human Residual DNA Quantitation System is a quantitative PCR (qPCR)-based system for the detection of host-cell DNA from human cells. Reliable and rapid, the system enables sensitive (limit of quantitation = 15 pg DNA per mL of test sample, Figure 1) and specific quantitation (Table 2) of human cell DNA, typically in less than 4 hours. This performance helps ensure a high degree of confidence in quantitation data obtained from a broad range of sample types.

In addition, the use of the Thermo Scientific™ Pharma KingFisher™ Flex 96 Deep-Well Magnetic Particle Processor with Applied Biosystems™ PrepSEQ™ sample preparation enables high recoveries of residual human DNA with decreased labor and less error. The Pharma KingFisher Flex 96 Deep-Well Magnetic Particle Processor can process up to 24 samples in triplicate, compared to 3 samples in triplicate using the manual method.

Table 1. DNA recovery using the manual protocol for the Applied Biosystems™ PrepSEQ™ Residual DNA Sample Preparation Kit. Assay performance was determined using a 10 pg spike of human DNA.

Genomic DNA	Mean recovery	Mean CV
Human	86%	6%

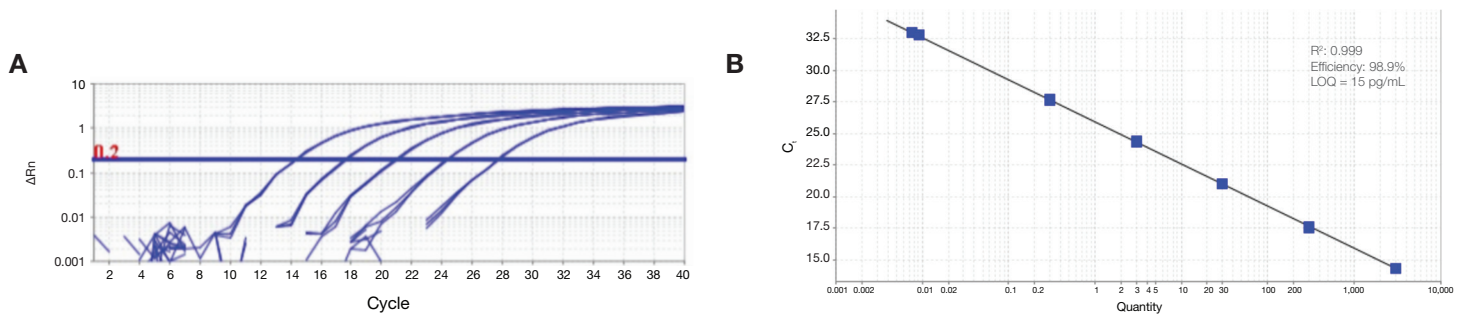


Figure 1. High sensitivity and broad dynamic range of the resDNASEQ Human Residual DNA Quantitation System. (A) Amplification plots generated using 10-fold serial dilutions (ranging from 3 ng to 30 fg) of human gDNA, provided in the kit. (B) Standard curve of the 10-fold dilution series. Data were analyzed using Applied Biosystems™ AccuSEQ™ Real-Time PCR Software.

Table 2. High specificity for human residual DNA. Assay cross-reactivity was tested in the presence of an excess (10 ng) of nontarget DNA such as CHO, *E. coli*, MDCK, NS0, and *Pichia*. The assay is specific to human DNA and is unaffected by the presence of a high concentration of unrelated DNA.

DNA	C _t
CHO	29.27
<i>E. coli</i>	31.20
MDCK	31.51
NS0	31.29
<i>Pichia</i>	30.38
Human (3 ng)	13.59*

Ordering information

Product	Quantity	Cat. No.
resDNASEQ Quantitative Human DNA Kit	100 reactions	A26366
resDNASEQ Quantitative Human DNA Kit with PrepSEQ Residual DNA Sample Preparation Kit	100 reactions	A27335
Sample preparation and automation		
PrepSEQ Residual DNA Sample Preparation Kit	100 reactions	4413686
Pharma KingFisher Flex 96 Deep-Well Magnetic Particle Processor	1 instrument	A31508
System		
QuantStudio 5 Real-Time PCR System	1 instrument	A31671
Software		
AccuSEQ Real-Time PCR Software	1 license	A40303
Service		
QuantStudio 5 IQ/OQ Service	1 service	A45613

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