applied biosystems®
by life technologies™

resDNASEQ® Vero Residual DNA Quantitation System

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

- Highly sensitive quantitation using proven TaqMan® real-time qPCR technology (Figure 1)
- Manual and automated sample preparation, optimized for quantitative recovery from complex sample matrices (Table 1)
- Consistent performance across the expected range of DNA fragment sizes (Figure 2)
- Integrated system from sample to results, with sample preparation, master mix, TaqMan® primer/probe mix, and genomic DNA standard

The resDNASEQ® Vero Residual DNA Quantitation System is a quantitative PCR (qPCR)-based system for the detection of host cell DNA from Vero cells (African green monkey), an expression system commonly used for the production of vaccines. Reliable and rapid, the system enables sensitive (LOQ = 1.5 pg DNA per mL of test sample, Figure 1) and specific (Figures 2 and 3) quantitation of Vero 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—from in-process samples to final product—whether the sample contains high molecular weight or sheared DNA (Figure 3).

Table 1. DNA recovery using the manual PrepSEQ® sample preparation protocol. Assay performance data using 10 pg Vero genomic DNA spike per sample, 2 matrices, and 27 test samples.

	Mean recovery	Mean CV
Vero	86%	6%

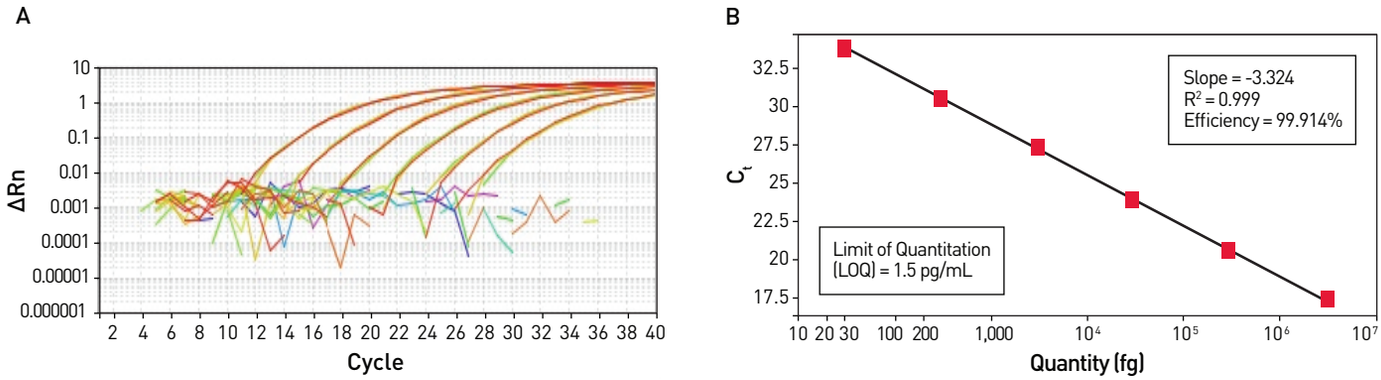

Figure 1. High sensitivity and broad dynamic range using the resDNASEQ® Vero Residual DNA Quantitation System. (**A**) The amplification plots were generated using 10-fold serial dilutions (ranging from 3 ng to 30 fg) of Vero genomic DNA, provided in the kit. (**B**) The standard curve of the 10-fold dilution series. Data were analyzed using AccuSEQ® Real-Time Detection Software.

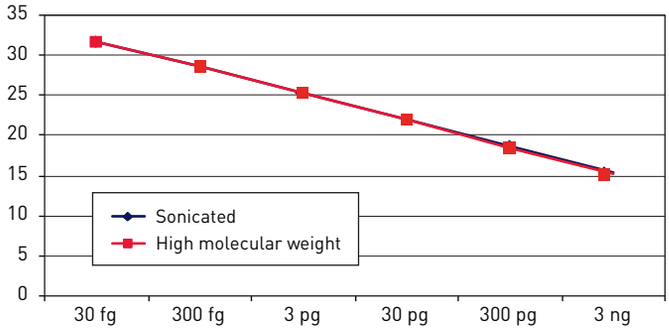

Figure 2. Consistent quantitation across a broad range of fragment sizes. Standard curves were generated using 10-fold serial dilutions of high molecular weight (red) and fragmented (blue) DNA from 3 ng to 30 fg. Fragmented DNA was generated by sonicating total Vero genomic DNA. Fragmentation of the DNA was confirmed by agarose gel analysis.

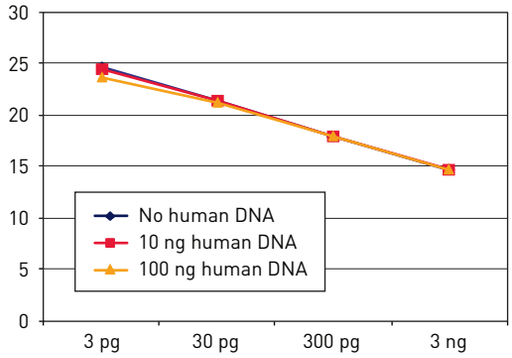

Figure 3. Assay specificity. Standard curves generated using 10-fold serial dilutions (3 ng to 3 pg) of Vero genomic DNA (included in the kit) in the presence of 100 ng human DNA (yellow), 10 ng human DNA (red), and no human DNA (blue).

Ordering information

Description	Part No.
resDNASEQ® Vero Residual DNA Quantitation System	
resDNASEQ® Quantitative Vero DNA Kit, 100 rxns, without Protocol and Quick Reference Card	4458444
resDNASEQ® Quantitative Vero DNA Kit and PrepSEQ® Residual DNA Sample Preparation Kit, 100 rxns, without Protocol and Quick Reference Card	4460367
PrepSEQ® Residual DNA Sample Preparation Kits	
PrepSEQ® Residual DNA Sample Preparation Kit, 100 rxns, with Protocol and Quick Reference Card	4415414
PrepSEQ® Residual DNA Sample Preparation Kit, 100 rxns, without Protocol and Quick Reference Card	4413686
AccuSEQ® Real-Time PCR Software	
AccuSEQ® Real-Time PCR Software v1.0	4443420

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