applied biosystems® by life technologies™

resDNASEQ® MDCK Residual DNA Quantitation System

Integrated sample preparation and real-time PCR assay for the quantitation of Madin-Darby canine kidney (MDCK) 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® MDCK Residual DNA Quantitation System is a quantitative PCR (qPCR)-based system for the detection of host cell DNA from Madin-Darby canine kidney (MDCK) cells, 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 (Figure 3) quantitation of MDCK 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 2).

Table 1. DNA recovery using the manual PrepSEQ® sample preparation protocol. Assay performance data from 1 pg MDCK genomic DNA spiked into 6 test samples.

	Mean recovery	Mean CV
MDCK	83%	3%

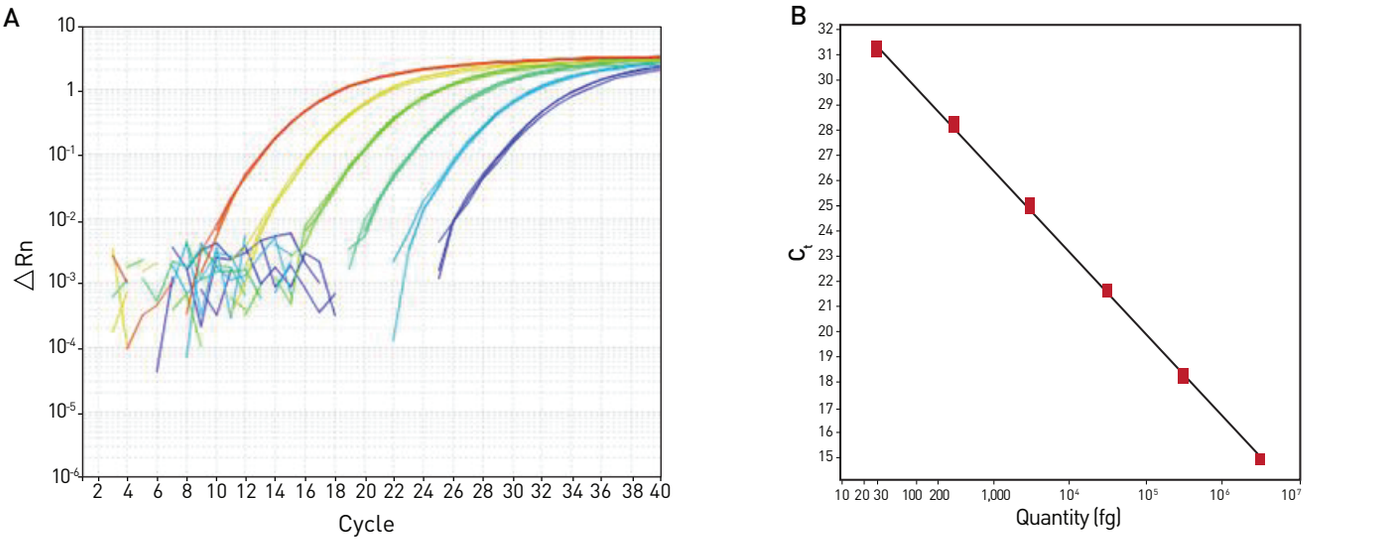

Figure 1. High sensitivity and broad dynamic range using the resDNASEQ® MDCK Residual DNA Quantitation System. (A) The amplification plots were generated using 10-fold serial dilutions (containing 3 ng to 30 fg) of MDCK genomic DNA, provided in the kit. **(B)** Standard curve of the 10-fold dilution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

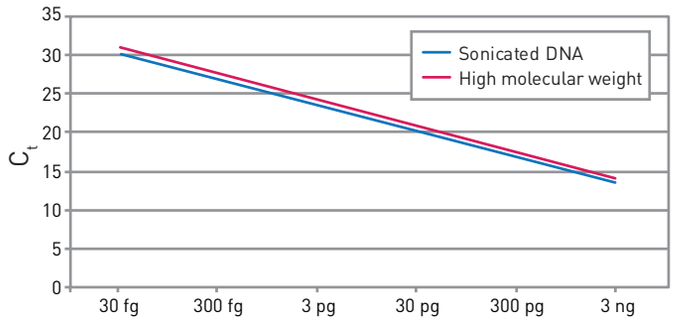

Figure 2. Consistent quantitation across a broad range of fragment sizes. Standard curves were generated using 10-fold serial dilutions of high molecular weight or fragmented DNA, from 3 ng to 30 fg. Fragmented DNA was generated by sonicating total MDCK genomic DNA. Fragmentation of the DNA was confirmed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

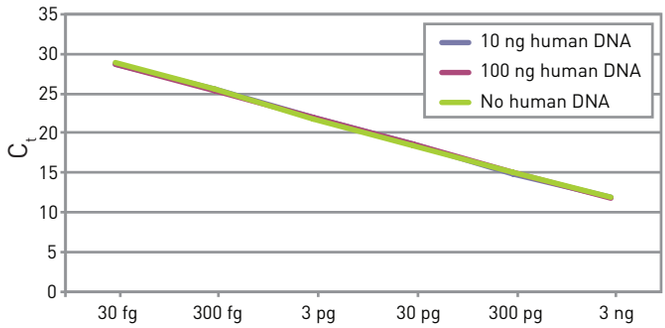

Figure 3. Assay specificity. Standard curves were generated using 10-fold serial dilutions of MDCK genomic DNA in the presence of 100 ng, 10 ng, or no human DNA.

Ordering information

Product	Cat. No.
resDNASEQ® MDCK Residual DNA Quantitation System	
resDNASEQ® MDCK Residual DNA Kit, 100 rxns, without protocol and Quick Reference Card	4464335
PrepSEQ® Residual DNA Sample Preparation Kit	
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