

resDNASEQ® *Pichia pastoris* Residual DNA Quantitation System

Integrated sample preparation and real-time PCR assay for the quantitation of *Pichia pastoris* 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® *Pichia pastoris* Residual DNA Quantitation System is a quantitative PCR (qPCR)-based system for the detection of host cell DNA from *Pichia pastoris* cells, an expression system commonly used for the production of recombinant proteins. Reliable and rapid, the system enables sensitive (LOQ = 15 pg DNA per mL of test sample, Figure 1) and

specific (Figure 3) quantitation of *Pichia pastoris* 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 *Pichia pastoris* genomic DNA spiked into 6 test samples.

	Mean recovery	Mean CV
<i>Pichia pastoris</i>	88%	10%

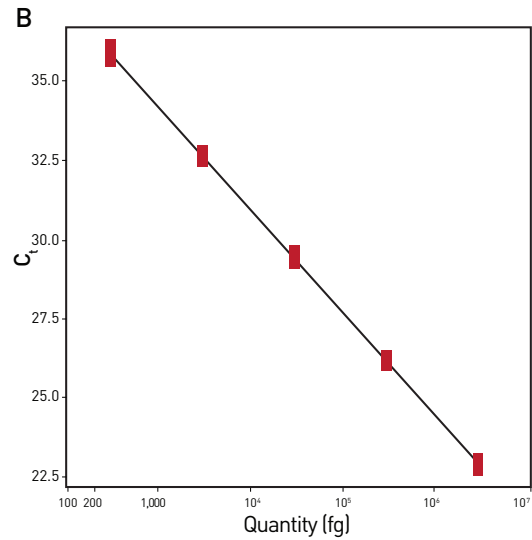
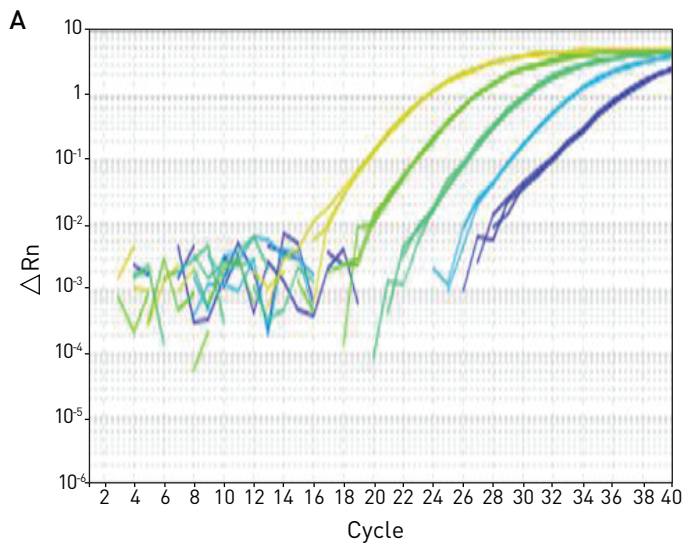


Figure 1. High sensitivity and broad dynamic range using the resDNASEQ[®] *Pichia pastoris* Residual DNA Quantitation System. (A) The amplification plots were generated using 10-fold serial dilutions (containing 3 ng to 300 fg) of *Pichia pastoris* genomic DNA, provided in the kit. (B) Standard curve of the 10-fold dilution series. Data were analyzed using AccuSEQ[®] Real-Time Detection Software.

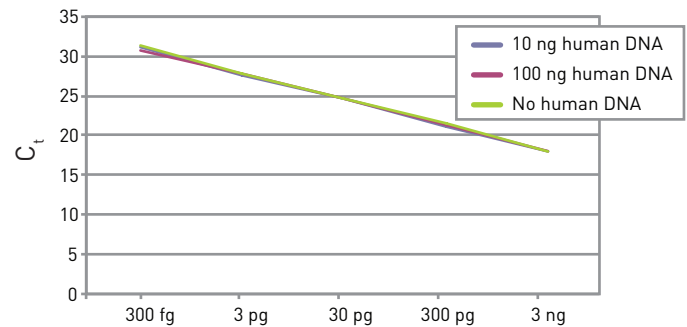
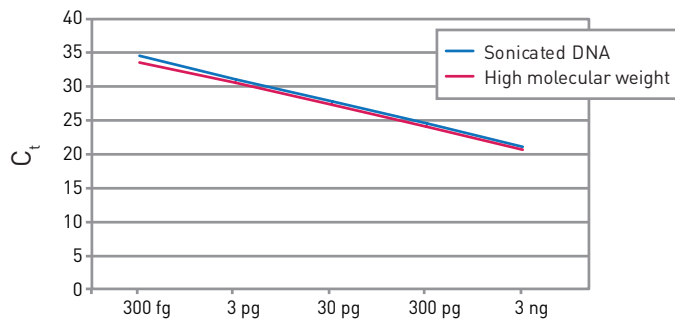


Figure 2. Consistent quantitation across a broad range of fragment sizes. Standard curves were generated using 10-fold serial dilutions of high molecular weight or fragmented DNA, from 3 ng to 300 fg. Fragmented DNA was generated by sonicating total *Pichia pastoris* genomic DNA. Fragmentation of the DNA was confirmed by agarose gel analysis.

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

Ordering information

Product	Cat. No.
resDNASEQ[®] <i>Pichia pastoris</i> Residual DNA Quantitation System	
resDNASEQ [®] <i>Pichia pastoris</i> Residual DNA Kit, 100 rxns, without protocol and Quick Reference Card	4464336
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

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