

Extracta Plus RNA

Rapid extraction and purification of high-quality total RNA from cultured cells or tissue

FEATURES AND BENEFITS:

- Rapid protocol – From cells or tissue samples to high-quality total RNA in just 25 mins
- Streamlined gDNA removal – Novel DNA removal column eliminates gDNA contamination and need for DNase treatment
- Extraction of low input quantities – Ability to extract RNA from as little as 10 cells
- Downstream compatibility – Ideal for applications such as RT-qPCR and next generation sequencing

DESCRIPTION:

The Extracta Plus RNA kit provides rapid extraction and purification of total RNA from cultured human or animal cells and from tissue samples. The Extracta Plus spin column workflow enables simultaneous processing of multiple samples in 25 mins to yield purified total RNA suitable for a range of downstream applications. The kit includes specially designed Extracta Plus DNA removal columns for effective removal of genomic DNA contamination, providing a convenient solution for applications that are sensitive to low amounts of DNA contamination such as RT-qPCR and NGS.

High, Reproducible RNA Yield

The efficient, reproducible extraction process allows total RNA extraction from as little as 10 cells input quantity.

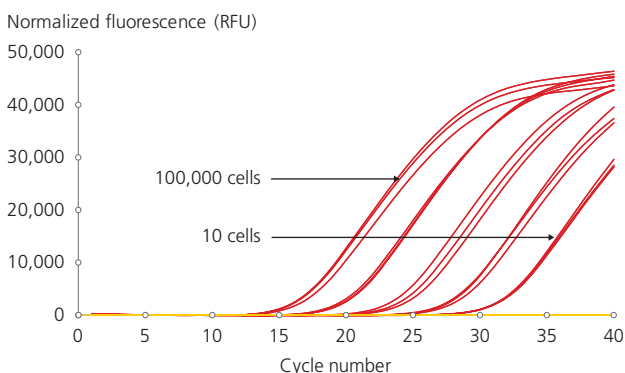


Figure 1 Quantitative extraction of RNA from dilute cell quantities. Total RNA was purified in triplicate from HeLa cell quantities from as much as 100,000 to as little as 10 cells using the Extracta Plus RNA Kit and eluted in a volume of 30 μ l. A portion of the RNA (1.5 μ l) was then used for qPCR analysis of β -actin mRNA using the qScript XLT ToughMix. Results demonstrate successful and reproducible extraction of RNA from a wide range of input.

Extracta Plus RNA Procedure

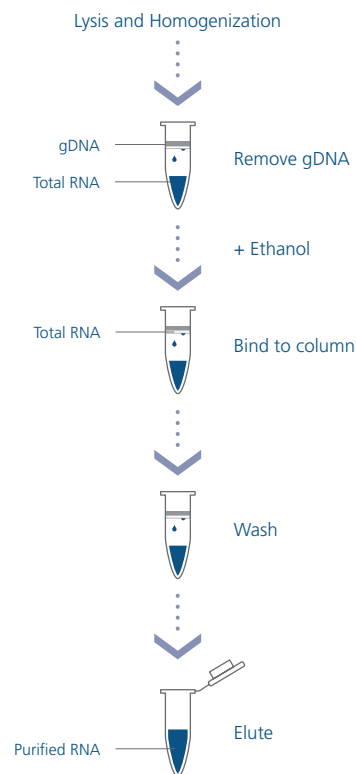


Figure 2 Extracta Plus RNA procedure. This procedure can be completed in just 25 mins, resulting in ready-to-use total RNA applicable for sensitive downstream applications such as RT-qPCR and NGS.

Effective gDNA Removal

The Extracta DNA removal column achieves effective gDNA removal without a separate DNase treatment. Quantification of residual gDNA by qPCR demonstrates negligible gDNA within the total RNA extracted from cultured cells or tissues.

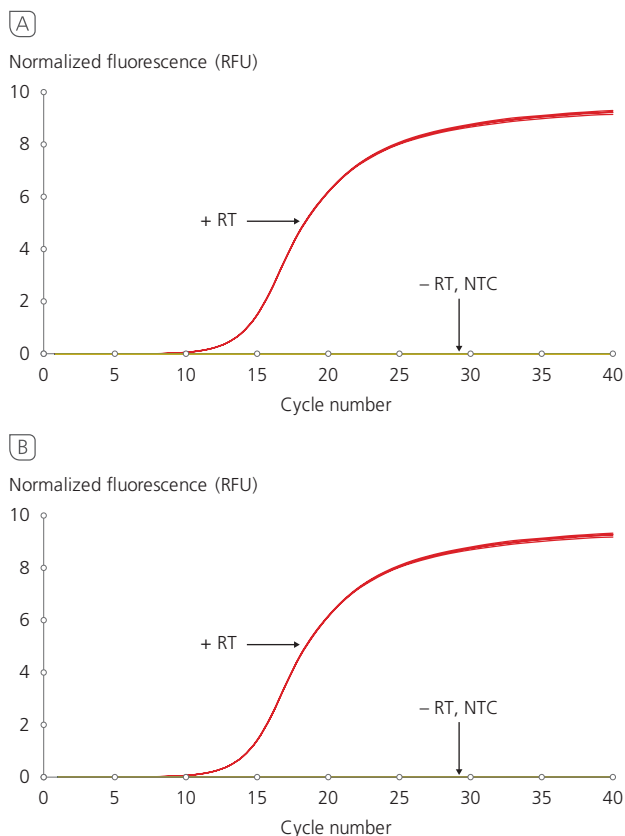


Figure 3 Effective gDNA removal from cells and tissue. Total RNA was purified from **A** 1×10^6 HeLa cells or **B** 10 mg rat kidney tissue using the Extracta Plus RNA Kit. RT-qPCR assays were performed with (+RT) or without (-RT) reverse transcriptase.

Sample	Total RNA yield (ng/ μ l)	gDNA percent of total nucleic acid
HeLa cells	787.1	0.001%
Jurkat cells	201.45	0.001%
Rat kidney tissue	961.55	0.003%
Rat lung tissue	378.7	0.05%

Table 1 Total RNA yield & negligible gDNA yield. qPCR assays for human or rat β -actin were performed. A standard curve of human/rat gDNA was used to quantify the amount of gDNA contamination in the purified RNA. For all samples, gDNA was present in negligible quantities.

Amplification of Long mRNA Targets

Successful extraction of intact high molecular weight RNA was demonstrated by RT-PCR of long targets, ideal for cloning or long range sequencing applications.

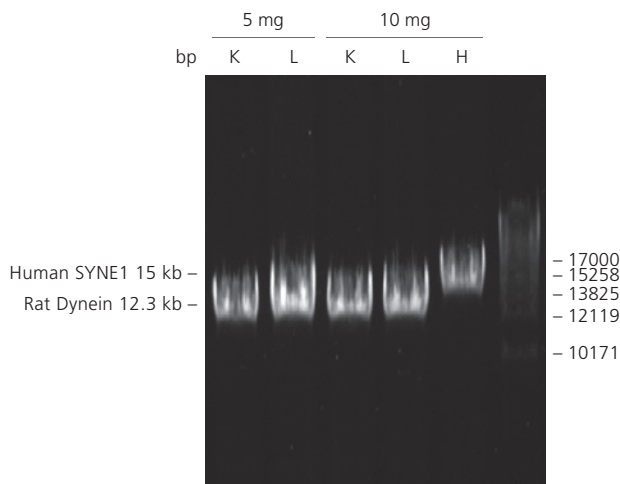


Figure 4 Extraction of intact high molecular weight RNA from tissues and cultured cells. Total RNA was purified from either 5 or 10 mg of the rat kidney (K) or lung (L) tissue or from 1×10^6 cultured HeLa cells (H) using the Extracta Plus RNA Kit. Large fragments of the rat Dynein mRNA and the human SYNE1 mRNA were amplified via RT-PCR from 200 ng of RNA using qScript Ultra Flex Kit and then repliQa HiFi Toughmix. Gel analysis of the product demonstrates large quantities of intact and high molecular weight mRNA originally present in the RNA samples.

ORDER INFO

Product Name

Extracta Plus RNA - 10
Extracta Plus RNA - 50

Quantabio Catalog Number

95214-010
95214-050

Size

10 rxns
50 rxns

Quantabio products are intended for molecular biology applications. The products are not intended for the diagnosis, prevention or treatment of a disease.
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