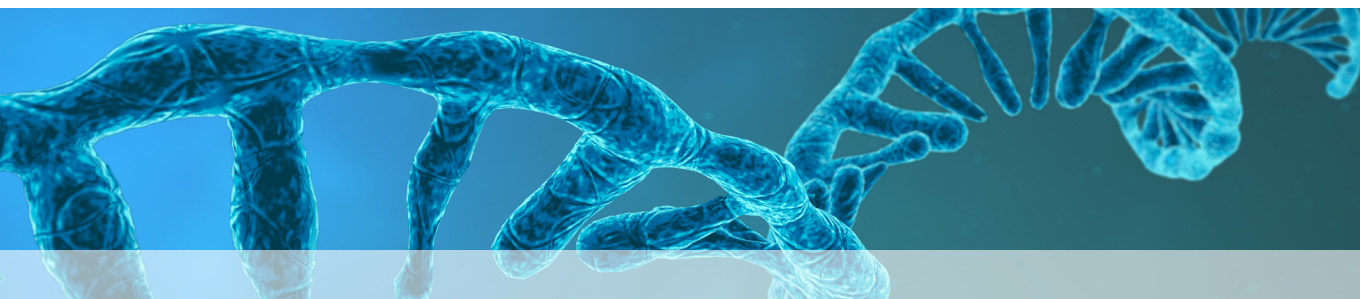


NucleoMag[®] RNA

Reliable RNA extraction from cells and tissue on the MagnetaPure 32 automated extraction robot



Introduction

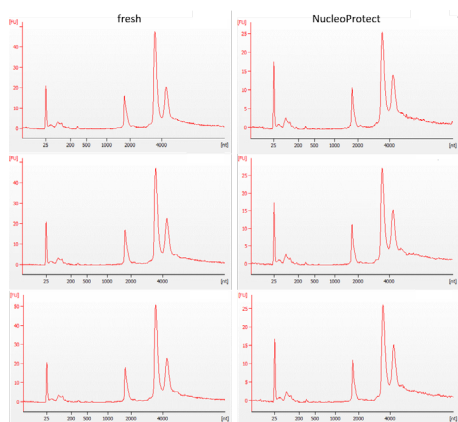
RNA is the basis for genome-wide transcriptome profiling studies, which provide an in-depth understanding of gene expression networks and patterns, cross-cancer gene signatures or genetic biomarkers. The analysis of such expression profiles or genetic biomarkers is critical for developing advanced strategies for infection control or may lead to significant insights into tumorigenesis and metastasis.

The MACHEREY-NAGEL NucleoMag[®] RNA kit is designed for reliable preparation of RNA from various tissue or cell samples. The purified RNA is of high purity and integrity. It meets all the requirements imposed by sophisticated downstream analysis methods such as real-time PCR (RT-qPCR), cDNA synthesis, RNA-Seq or microarray analysis

In the application data below we exemplarily show the automated RNA extraction from HeLa cells using the NucleoMag[®] RNA kit and the ready-to-use script for the MagnetaPure 32.

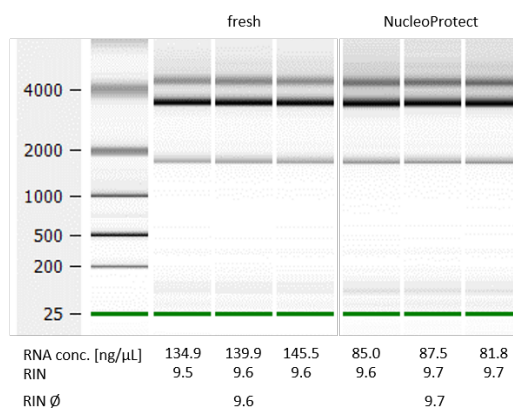
NucleoMag [®] RNA	
Technology	Magnetic beads
Sample material	< 2 × 10 ⁵ cells, < 20 mg human/animal tissue
Typical yield	< 30 µg (depending on starting material)
Elution volume	50–200 µL
Fragment size	> 200 nt
Preparation time	approx. 38 min

MagnetaPure 32	
Description	Automated nucleic acid extraction instrument
Technology	Magnetic rods
Capacity	Up to 32 samples/run
Features	Compact Bench-top robot, verified ready-to-use NucleoMag [®] scripts, built-in UV lamp for decontamination, built-in heating block, open and flexible programming



Quality of isolated RNA from HeLa cells

Total RNA from 5 × 10⁵ fresh (left) or NucleoProtect[®]-stabilized (right) HeLa cell samples was purified using the NucleoMag[®] RNA kit on the MagnetaPure 32 automated extraction robot following the standard protocol procedure. The quality of purified RNA was determined by using the Bioanalyzer[®] 2100 the total RNA 600 Nano kit. The graphs show exemplified Bioanalyzer results of non-denatured RNA.



High reproducibility in automated RNA purification

Bioanalyzer results demonstrate the reliable detection of clear bands for each sample and RIN values constantly above 9.6 with a mean of 9.61 (standard deviation: 0.07). Measured RNA concentrations range from 84.8 ± 2.9 ng/µL (NucleoProtect-stabilized HeLa cells) to 140.1 ± 5.3 ng/µL (fresh HeLa cells).

Product	Specifications	Pack of	REF
NucleoMag [®] RNA	Kit based on magnetic bead technology for the isolation of genomic DNA from tissue and cell samples including NucleoMag [®] B-Beads, buffers, lyophilized rDNase	96 preps	872167
		384 preps	872168

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