

RNA and Protein from one Lysate

undivided samples parallel isolation

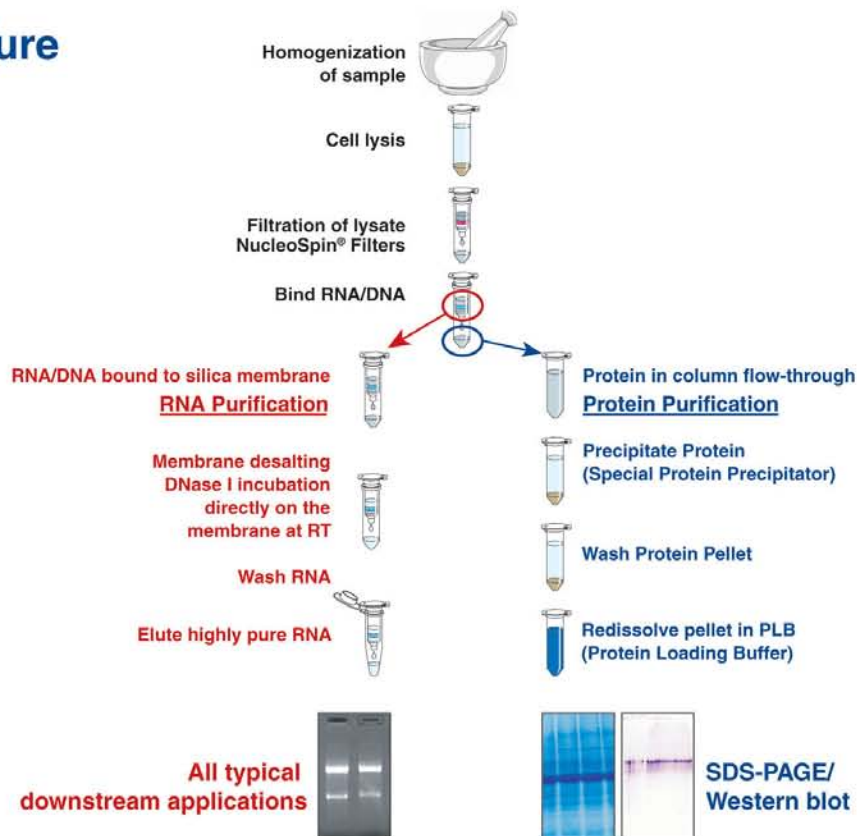
NucleoSpin® RNA/Protein

Rapid Purification of total RNA and Protein from Cells and Tissue

Studies of gene expression on transcriptional and translational level are often complicated by small sample sizes and incompatible techniques for RNA and protein isolation.

The **NucleoSpin® RNA/Protein Kit** enables the parallel isolation of RNA and protein from one lysate and a broad variety of starting materials.

Procedure



Features

- ✓ **RNA and Protein from one lysate**
simple and fast procedure: no phenol, no chloroform, no acetone
- ✓ **High quality RNA**
RNA is suitable for all common downstream applications e.g. RT-PCR, TaqMan®, blotting, or microarray
- ✓ **High Protein yield**
high protein concentration, suitable for SDS-PAGE and Western blot analysis
- ✓ **Parallel DNA purification possible**
parallel DNA purification is possible in combination with the optional NucleoSpin® RNA/DNA buffer set

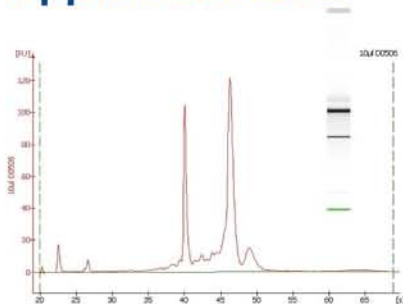
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Applications

- ✓ gene expression profiling on transcription and translation levels

Application data



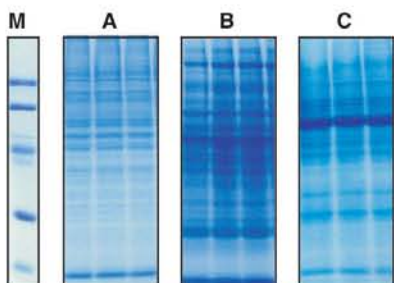
High quality
of RNA

Sample material:
10⁶ HeLa cells

Elution was done using 100 µl RNase free water, 10 µl were analyzed on Agilent Bioanalyzer according to the standard protocol.

High quality of RNA proven by
Bioanalyzer analysis!

Quantitative
Protein Isolation



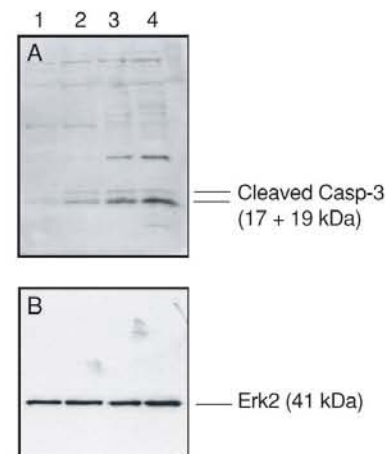
Sample material:

- A: 10⁶ HeLa cells
- B: 30 mg liver
- C: 100 mg garden cress seedlings

Just 1.4 % of the total isolated protein
loaded per lane!

This corresponds to protein from 14 000 HeLa cells (A), 0.43 mg liver (B), and 1.43 mg garden cress seedling (C), respectively per lane.

NucleoSpin[®] RNA/Protein procedure results in sufficient protein for SDS PAGE analysis



Expression analysis of cleaved caspase-3 and Erk2 in carcinoma cell lines upon treatment with an apoptosis inducing DNA damaging agent

- Sample material: carcinoma cell line
- Sample amount: approx. one million cells
- Precipitated volume of column flow-through for protein isolation: 200 µl
- Protein resolubilization volume: 200 µl PLB
- Sample volume loaded per lane: 16 µl
- A: Western-blot probed with anti-cleaved caspase-3
- B: Western-blot probed with anti-Erk2

- 1: untreated
- 2: 24 h upon treatment
- 3: 48 h upon treatment
- 4: 120 h upon treatment

Data was kindly provided by
Steffen Naumann and Prof. B. Kaina,
Department of Toxicology,
University of Mainz, Germany

Visualization of changes in protein level possible!

Ordering Information:

Product	Cat. No.
NucleoSpin [®] RNA/Protein (10/50/250 preps)	740 933.10 / .50 / .250
NucleoSpin [®] RNA/DNA buffer set (100 preps)	740 944

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