

Small RNA kit

Fast quality control of Small RNA with minimal sample consumption

The Small RNA kit for the Agilent 2100 bioanalyzer provides a fast and sensitive analysis to resolve small nucleic acids in the size range of 6 to 150 nt

The Small RNA Assay will enhance your research if you need a high resolution method to analytically separate Small RNA samples to measure miRNA. Various RNA species, for example, siRNA, t-RNA or other oligonucleotides within given ranges can be visualized and detected down to picogram concentrations in a few minutes.



Advantages of the Lab-on-a-Chip approach

- High resolution – miRNA smear region separated from t-RNA.
- Minimal sample consumption – use as little as 50 pg of purified miRNA or 10 ng of total RNA for analysis in 1 μL volume.
- Faster results – complete automated analysis of all samples in about 30 minutes.
- Best assay accuracy and precision – pre-packaged reagents and standardized assay protocols yield highly accurate and reproducible data.
- Quick and easy sample comparison – automated sample alignment, one-click overlay, scaling and zooming features
- Conveniently archived and stored digital data – easily share data with others and export it for publications or presentations.
- Analyze total RNA (10-100 ng/ μL) directly, fractionated, or synthetic samples
- Clean – minimal exposure to hazardous materials, such as ethidium bromide.
- Easy-to-use – simply load the chip, press "start" and the Agilent 2100 bioanalyzer does the rest.

Specifications Agilent Small RNA kit

Analytical specifications

Analysis range	6 -150 nt
Reproducibility of quantitation	25 % CV (intrachip, for ladder)
Quantitative range	50-2000 pg/ μL of purified miRNA in water
Buffer compatibility	10 mM Tris, 0.1 mM EDTA
Sensitivity	50 pg/ μL of 40 nt ladder fragment in water

Physical specifications

Analysis run time	30 minutes
Number of samples	11 samples/chip
Sample volume	1 μL
Kit stability	4 months if stored appropriately



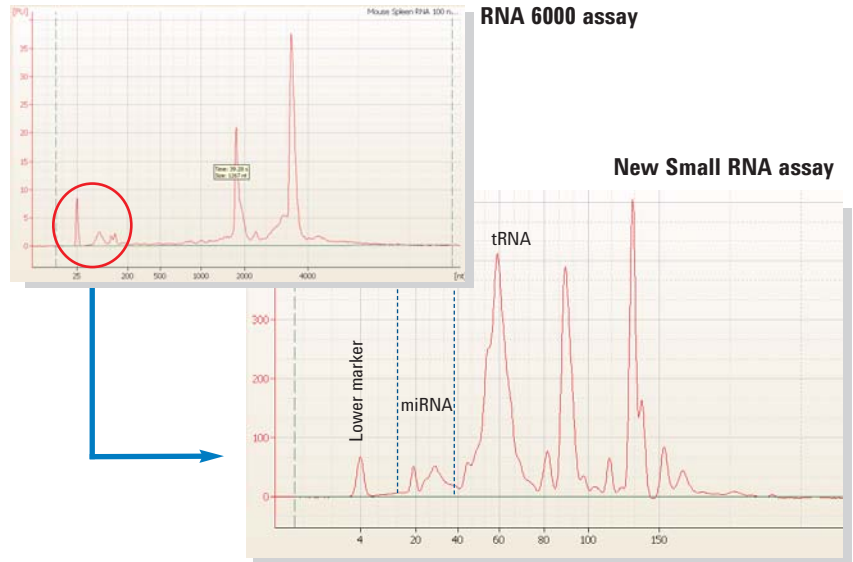
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Solutions for a wide range of applications

Identification and monitoring of small RNAs in total RNA extracts

- Detect and visualize miRNA directly in total RNA or in enriched samples.
- Measure and compare various small RNA regions in different extracts and tissues.
- Monitor and compare expression under various conditions.
- Unparalleled sensitivity in the picogram range and minimal sample consumption.

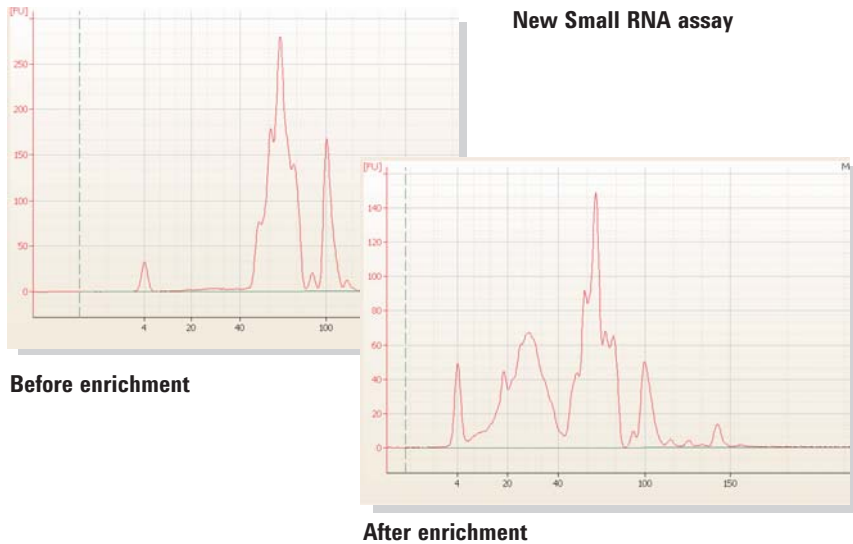
Small RNA's sized below 200 nt are hard to separate and measure at low concentrations. For better results in downstream experiments, e.g. miRNA microarrays or real time PCR, it is beneficial to know what quality and amounts of miRNA are available.



Optimization of miRNA extraction procedures

- Separate and visualize miRNA from other small RNA's.
- Evaluate miRNA smear yields while optimizing extraction parameters.

The Small RNA assay kit provides a solution to accelerate identification and characterization of miRNA. A reliable tool is needed to find the best out of various extraction procedures for miRNA. Reproducible quantitation at a 1 μ L sample consumption allows controlled optimization of all parameters. The figure shows a strong enrichment by a preparative polyacrylamide gel procedure.



Agilent 2100 bioanalyzer kits are available for the analysis of DNA, RNA, proteins and cells.



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