

Agilent RNA ScreenTape and High Sensitivity RNA ScreenTape Assays

Accelerate RNA analysis with the Agilent TapeStation systems



Automated RNA quality control with scalable throughput

The Agilent 4150 and 4200 TapeStation systems offer automated sample processing of 1 to up to 96 samples for quick and reliable RNA and DNA sample quality control.

The RNA ScreenTape has been developed for automated, efficient and reliable RNA analysis, including RNA characterization and quality assessment. The RNA integrity number equivalent (RIN[®]) provides an instant and objective evaluation of total RNA degradation. Depending on the sensitivity requirements of your application it is possible to choose between the RNA ScreenTape and the High Sensitivity RNA ScreenTape application.

RNA quality control (QC) has never been so easy – simply load the TapeStation system with the appropriate RNA ScreenTape device, loading tips, and your samples in 8-tube strips or a 96-well plate – and you will be reviewing results in as little as two minutes per sample!

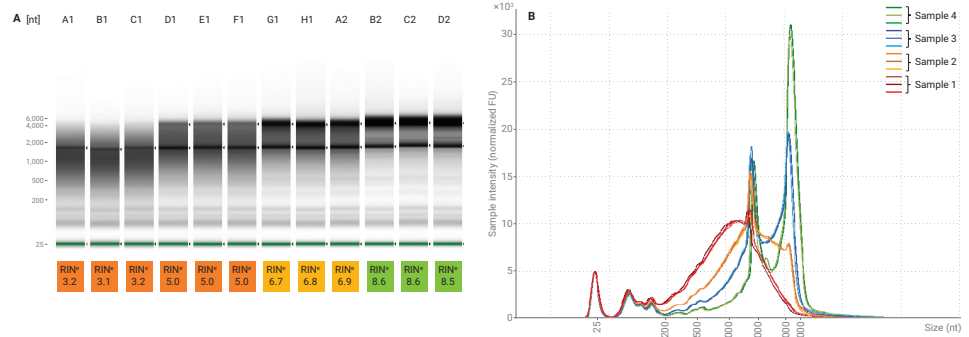
Total RNA analysis with the RNA ScreenTape device

For prokaryotic and eukaryotic total RNA samples, the TapeStation software automatically calculates the RIN^e, an objective measurement of RNA degradation.

Typical RNA ScreenTape applications

RNA QC in multiple workflows:

- microarray analysis
- next-generation sequencing
- quantitative RT-PCR



Four rat kidney RNA samples with different degradation stages were analyzed using the 4150 TapeStation system. The TapeStation Software displays the results as an electropherogram, a gel image, and data table. The RIN^e value is automatically determined, and directly displayed under the individual lane of the gel image (A). The overlay shows the corresponding electropherogram overlay (B). (Agilent publication number 5994-1038EN)

Key features

Excellent sensitivity

Qualify your precious RNA sample down to a concentration of 100 pg/ μ L.

RNA integrity number equivalent (RIN^e)

The RNA ScreenTape assay offers a numeric measurement, the RIN^e – for the assessment of prok. and euk. total RNA samples. RNA isolated from FFPE can be qualified with the DV₂₀₀ value.

Zero carryover

In addition to individual filtered loading tips for each sample – the ScreenTape device runs each RNA sample in a separate lane.

Scalable throughput

Analyze any number of samples without affecting the cost per sample.

Low sample need

Use no more than 2 μ L of your precious samples per run – even for high sensitivity analysis.

Fast results

Obtain results in as little as two minutes per RNA sample.

High flexibility

Implement RNA QC in multiple workflows such as microarray, next-generation sequencing (NGS), quantitative RT-PCR.

Analytical specifications

	Agilent RNA ScreenTape	Agilent High Sensitivity RNA ScreenTape
Sensitivity ¹	5 ng/μL	100 pg/μL
Quantitative precision	10% CV	15% CV
Quantitative accuracy	±20%	±30%
Quantitative range	20 - 500 ng/μL	500 - 10,000 pg/μL
RIN ^e functional range ²	25 - 500 ng/μL	1,000 - 25,000 pg/μL
Maximum buffer concentration in sample	200 mM Tris 20 mM EDTA or 50 mM NaCl	10 mM Tris 1 mM EDTA

¹ Signal-to-noise >3 (single peak)

² RIN^e - RNA integrity number equivalent

Physical specifications

	Agilent RNA ScreenTape	Agilent High Sensitivity RNA ScreenTape
Analysis time	16 samples < 20 min 96 samples < 95 min	16 samples < 35 min 96 samples < 180 min
Samples per consumable	16	16
Sample volume required	1 μL	2 μL
Kit stability	6 months	6 months
Kit size	112 samples	112 samples

Ordering information

	Part number
Agilent 4150 TapeStation system	
Includes the 4150 TapeStation instrument, TapeStation software, vortexer, accessories, consumables, user information, installation and familiarization services. <i>Does not include ScreenTape consumables and reagents.</i>	G2992AA
Agilent 4200 TapeStation system	
Includes the 4200 TapeStation instrument, laptop PC, TapeStation software, vortexer, accessories, consumables, user information, installation and familiarization services. <i>Does not include ScreenTape consumables and reagents.</i>	G2991BA
Agilent RNA ScreenTape	
Includes 7 ScreenTape devices. (Order with 5067-5577 and 5067-5578)	5067-5576
Agilent RNA ScreenTape Sample Buffer	
For the analysis of total RNA down to a sensitivity of 5 ng/μL. Sample Buffer only. (Order with 5067-5576 and 5067-5578)	5067-5577
Agilent RNA ScreenTape Ladder	
For the analysis of total RNA down to a sensitivity of 5 ng/μL. Ladder only. (Order with 5067-5576 and 5067-5577)	5067-5578
Agilent High Sensitivity RNA ScreenTape	
For the high sensitivity analysis of total RNA down to a sensitivity of 100 pg/μL. Includes 7 ScreenTape devices. (Order with 5067-5580 and 5067-5581)	5067-5579
Agilent High Sensitivity RNA ScreenTape Sample Buffer	
For the high sensitivity analysis of total RNA down to a sensitivity of 100 pg/μL. Sample Buffer only. (Order with 5067-5579 and 5067-5581)	5067-5580
Agilent High Sensitivity RNA ScreenTape Ladder	
For the high sensitivity analysis of total RNA down to a sensitivity of 100 pg/μL. Ladder only. (Order with 5067-5579 and 5067-5580)	5067-5581

www.agilent.com/genomics/rna-screentape

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