

High Sensitivity DNA Kit

Size, quantify and QC your DNA samples with highest sensitivity using the Agilent 2100 Bioanalyzer

Sizing and quantification of low concentrated DNA samples in the pg/μL concentration range

Running next generation sequencing (NGS) projects successfully requires optimized sample preparation workflows and well defined protocols which should be followed strictly. The Agilent High Sensitivity DNA Kit for the Agilent 2100 Bioanalyzer offers improved sensitivity for checking the size and quantity of precious low concentrated DNA samples. Whether fragmented DNA starting material for various downstream applications, DNA derived from ChIP or DNA sequencing libraries, the High Sensitivity DNA kit reliably sizes and quantifies your sample in the lower pg/μL concentration range.

Advantages of the Lab-on-a-Chip approach

- **Increased sensitivity for DNA fragment analysis** – down to 5 pg/μL
- **Sizing, quantification and quality control of fragmented DNA or DNA sequencing libraries** – down to 100 pg/μL
- **Broad linear dynamic range** – enables the detection of less abundant products, e.g. PCR artifacts and impurities
- **Easy definition of smear regions** – specify your size range of interest
- **Sizing accuracy** – samples are normalized to two internal markers and an external ladder



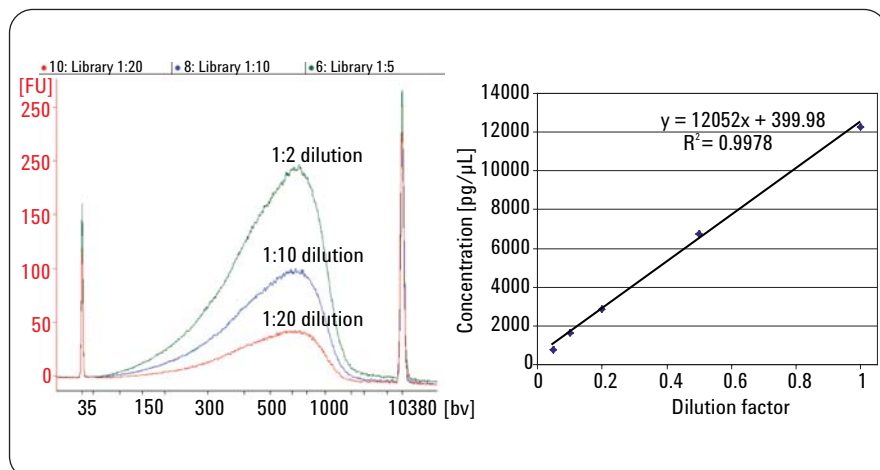
- **Quantification accuracy and reproducibility** – automated quantification of each DNA fragment against internal standards
- **Minimal sample consumption** – only 1 μL of material required per analysis
- **Ready-to-use** – standardized assays and pre-packaged reagent kits
- **Quick and easy sample comparison** – one-click overlay, scaling or zooming features
- **Alternative data display options** – results are displayed as gel-like images, electropherograms, and in tabular formats.

Specifications	Agilent High Resolution DNA Kit
Analytical specifications	
Sizing range	50-7000 bp
Typical sizing resolution	50-600 bp: ± 10 % 600-7000 bp: ± 20 %
Sizing accuracy	± 10 % CV (for ladder as sample)
Sizing reproducibility	5 % CV (for ladder as sample)
Quantitation accuracy	20 % CV (for ladder as sample)
Quantitation reproducibility	50-2000 bp: 15 % CV; 2000-7000 bp: 10 % CV (for ladder as sample)
Quantitative range	5-500 pg/μL (for ladder as sample)
Maximum salt	10 mM Tris and 1 mM EDTA
Physical specifications	
Analysis run time	45 min
Numbers of samples	11 samples/chip
Sample volume	1 μL
Kit stability	4 months if stored appropriately
Instrument compatibility	Bioanalyzer types: G2938B, G2938C, G2939A

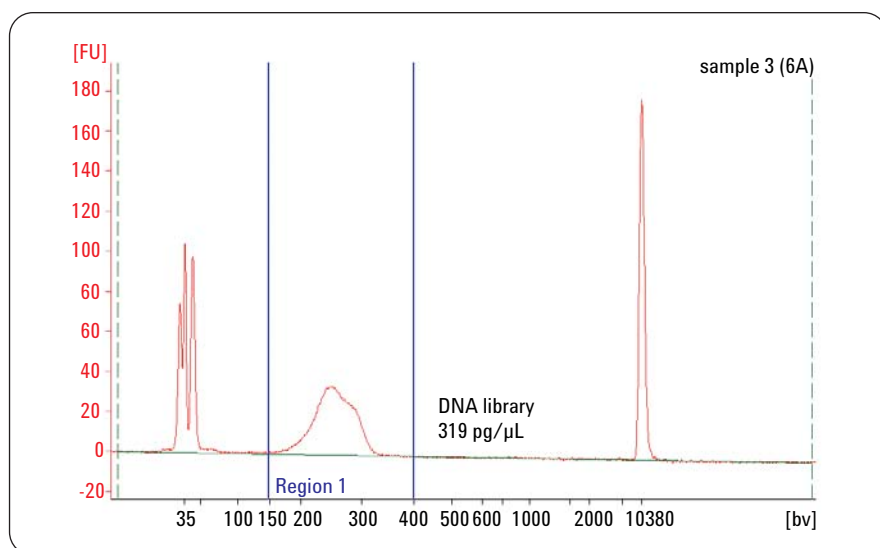


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Highest detection sensitivity for NGS sample prep workflows



Electropherogram overlay of a dilution series of fragmented dsDNA. Highest quantification accuracy for fragmented or sheared DNA can be achieved in a concentration range of 100 – 10000 pg/μL.



Sizing and quantification of an Illumina GAII library enriched with Agilent's SureSelect Target Enrichment platform and amplified with only 6 PCR cycles.

High sensitivity sizing and quantitation of fragmented DNA

It's imperative to ensure a reproducible and reliable next-gen sequencing sample preparation workflow, which must rely on the quantification and size range determination of low concentration fragmented DNA. Whether dealing with DNA material derived from ChIP or fragmented DNA from precious patient samples, the High Sensitivity DNA Kit allows sizing and quantifying sheared dsDNA starting material down to a concentration of 100 pg/μL.

Improving next-gen sequencing sample preparation workflow

Sequencing sample preparation protocols require DNA library amplification by PCR which can easily introduce amplification bias. With the High Sensitivity DNA kit, DNA libraries derived from just a few amplification cycles now can easily be analyzed, reducing amplification bias and improving the quality of sequencing data.

Features:

- Monitor purity and size range of DNA libraries
- Quantify low concentrated DNA libraries amplified with reduced PCR cycle numbers
- Limit PCR bias by reducing DNA library amplification cycles

Kits for the Agilent 2100 Bioanalyzer are available for the analysis of DNA, RNA, proteins and cells.



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