nCounter®
Analysis System

nanoString®

Gene expression you can Count On.

Accelerate your biomarker discovery and development with confidence and peace of mind. With robust performance on even the most difficult sample types and unparalleled flexibility in content and throughput, you can rapidly translate basic science discoveries into actionable clinical insights with the nCounter® Analysis System.

Robust Performance

- Gold standard technical reproducibility resulting from direct digital detection (no technical replicates needed)
- Dynamic range of five logs
- Compatibility across a wide variety of sample types, including difficult FFPE, blood, and biofluids
- Innovative technical design eliminates need for enzymatic steps, amplification, cDNA conversion, or complicated sample prep
- Over 7,000 peer-reviewed publications to date prove nCounter is highly trusted and ultra-productive in the lab

Flexible Assays

- Generate 800+ plex data covering highly relevant biology for targeted applications
- Extensive menu of ready-to-ship panels designed with input from industry leading experts in the field
- Expert bioinformatics team available to assist with custom panel design, including gene selection
- Option to customize existing panels with up to 55 user-defined targets of interest
- Overlapping content with NanoString's spatial technologies offers broad biological insights from bulk to single cell spatial analysis

Efficient Workflow

- Walk-away automation and minimal hands-on time (<15 minutes on most assays)
- Rapid turnaround time with sample to answer in <24 hours
- Highly scalable systems have option to increase throughput with additional Prep Stations
- Easy data analysis and minimal storage requirements eliminate the need for bioinformatics support or expensive data storage
- Screen up to 96 samples per run with PlexSet™ chemistry

Robust Performance
Gold Standard FFPE Performance

Unique Chemistry

The key to nCounter generating highly robust data lies in the technical design of the chemistry. nCounter technology uses unique optical barcodes that hybridize to each target to enable digital counting of individual oligonucleotides without any enzymatic steps. Each barcode is made up of six fluorophores enabling highly multiplexed, single molecule counting.

Chemistry Highlights

• No RT, enzymatic steps

• No technical replicates needed

• Superior performance on degraded samples

Elegant Chemistry Design

| TARGET	CAPTURE PROBE	REPORTER PROBE		TARGET-PROBE COMPLEX

Broad Sample Compatibility

nCounter is compatible with most sample types, even decades old FFPE. It produces high quality data that would otherwise be difficult to produce with technologies that rely on high sample input. Consistent results can even be generated for longitudinal studies with a high degree of confidence on clinical-grade (often degraded) samples.

| CRUDE RNA	FFPE	FRESH FROZEN	BLOOD	PLASMA	SERUM	CELL LYSATES
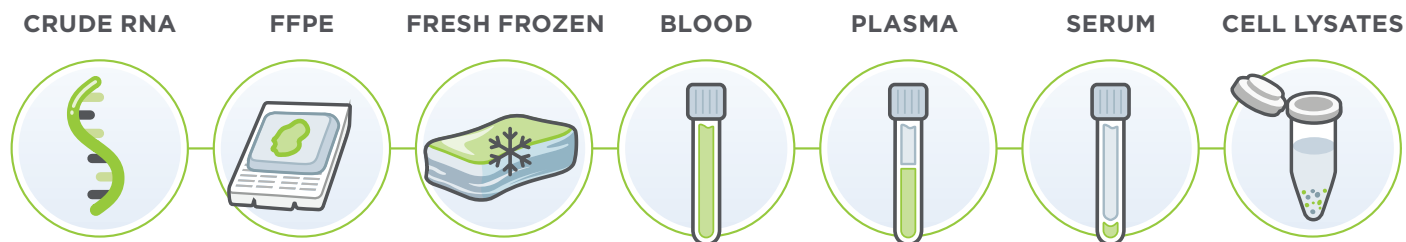
Superior performance on FFPE tissue sections

Since nCounter probes only require a 100 base pair region for hybridization, high quality results are produced even from degraded samples.
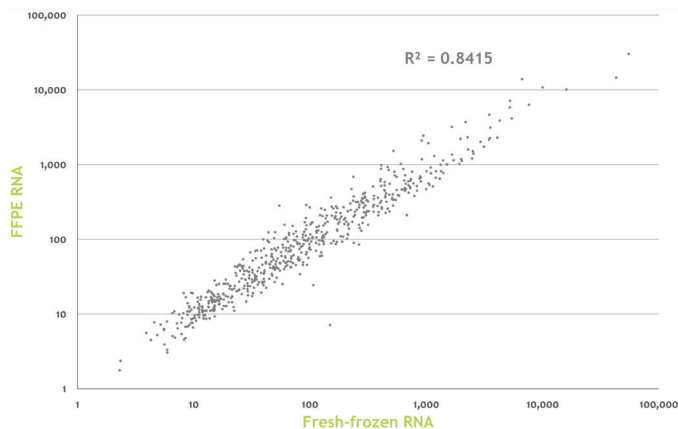

Reproducibility over a wide dynamic range

Direct, digital counting removes potential sources of variability from reverse transcription and amplification, enabling high precision and reproducibility over a wide dynamic range. Save reagents, sample, and money by eliminating technical replicates and confidently detect both high and low expressing genes.
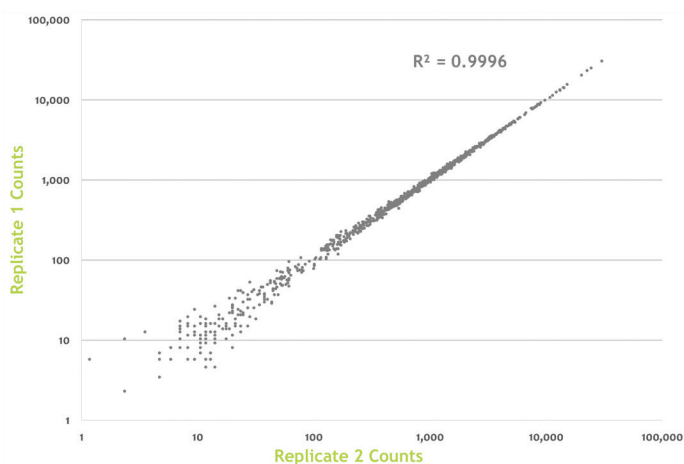
Compatible with cell lysates

Zero enzymatic steps mean you can confidently analyze samples directly from cell lysates without any RNA purification, saving time and reagents.
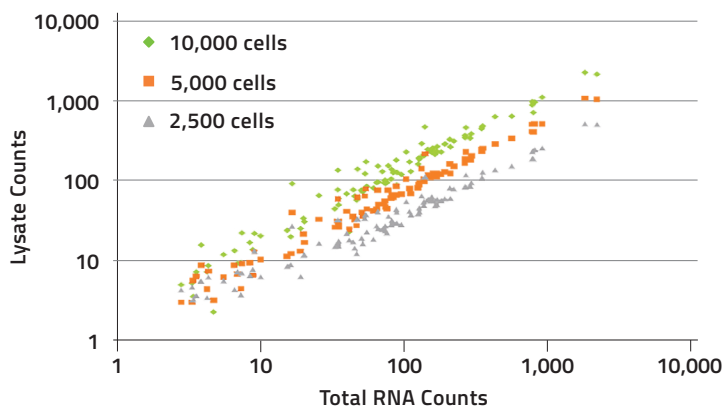
NanoString Publication Library

There are over 7,000 publications linked on the NanoString website written by researchers who have used nCounter in their labs. Filter by application, sample type, analyte, and more at nanostring.com

Flexible Assays
Comprehensive Panel Menu

Over 25 off-the-shelf gene expression panels are available for a wide variety of biological pathways and research areas. All panels are created with input from industry experts and current research topics and are updated regularly.

Panel Pro Selection Tool

Check out the Panel Pro Selection Tool to compare gene content and identify the right panel for your research at nanostring.com/PanelPro

FOR RESEARCH USE ONLY. Not for use in diagnostic procedures.

Custom Solutions

Researchers have the flexibility to tailor gene expression assay content to meet individual project needs.

Build your own custom gene expression

nCounter is compatible with most sample types, even including decades old FFPE. It produces high quality data that would otherwise be difficult to produce with technologies that rely on high sample input. Consistent results can even be generated for longitudinal studies with a high degree of confidence on clinical-grade (often degraded) samples.

Panel Plus: Customizeable Add-on to a Panel

OR

Build Content that is Customized for Any Gene, Any Organism

Gene Expression Panel **+** **Up to 55 User-defined Targets**

PANEL PLUS

Custom CodeSets

Turnkey Solution for Any Project
- Maximum target number: 800
- Daily sample throughput 24-96

Elements™

Increased Flexibility for Smaller Projects
- Maximum target number: 216
- Daily sample throughput: 24-96
- Optimized for validation projects

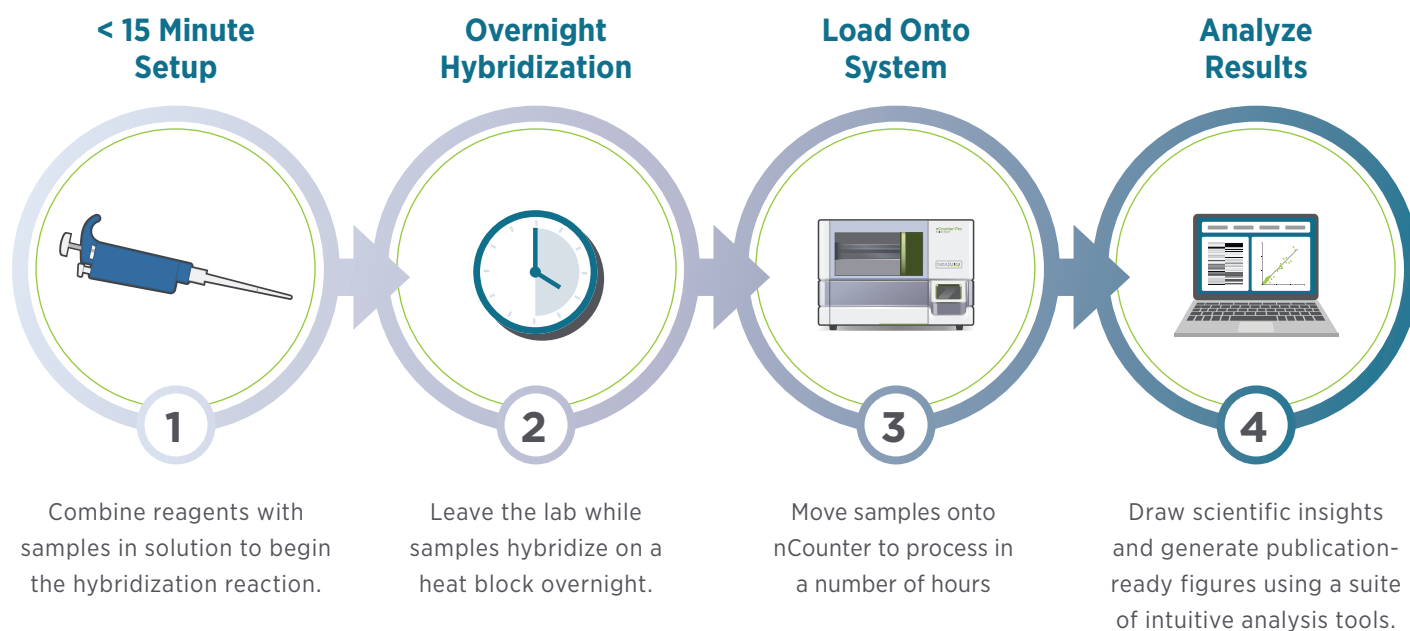**PlexSet™**

High-Throughput Chemistry
- Maximum target number: 96
- Daily sample throughput: 192-1,152
- Optimized for screening projects

Efficient Workflow
Scalable, Automated Time Saver

nCounter's seamless workflow enables you to regain independence over your research. Time spent on pipetting, monitoring systems, and getting lost in data can be spent doing what matters most – advancing your research. The workflow features a limited number of steps, reducing potential sources of variability, improving the reliability of results, and making training technicians easy.

Four Simple Steps Produce a Huge Amount of Data

< 15 Minute Setup	**Overnight Hybridization**	**Load Onto System**	**Analyze Results**
1	**2**	**3**	**4**
Combine reagents with samples in solution to begin the hybridization reaction.	Leave the lab while samples hybridize on a heat block overnight.	Move samples onto nCounter to process in a number of hours	Draw scientific insights and generate publication-ready figures using a suite of intuitive analysis tools.

Sample Throughput

	1 Run/day	1 Run/day	1 Run/day	2 Run/day	3 Run/day	3 Run/day
Samples per Lane	SPRINT	Pro: 1 Prep Station	Pro: 2 Prep Stations	SPRINT	Pro: 1 Prep Station	Pro: 2 Prep Stations
1	12	12	24	24	36	72
8*	96	96	192	192	288	576

*With PlexSet reagents

Data Analysis
Accelerated

NanoString offers a suite of intuitive analysis tools that enable you to gain insights from your data and share publication-quality figures and statistical outputs faster than ever.
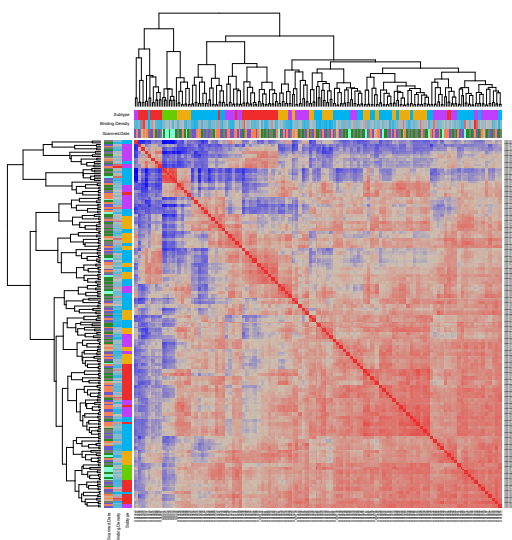

nSolver™ Analysis Software

An integrated analysis platform for storage, custom QC, and normalization of nCounter data. Generate highly-customized exports, basic statistical outputs, and figures quickly and easily with no incremental cost.

nCounter Advanced Analysis

A free, wizard-based add-on to nSolver for deeper data insights based on robust R statistics. Examine experimental trends, identify pathway-specific responses, and profile immune cell populations in shareable HTML reports.

Data analysis services for large projects are available. For more information contact: DAS@nanostring.com
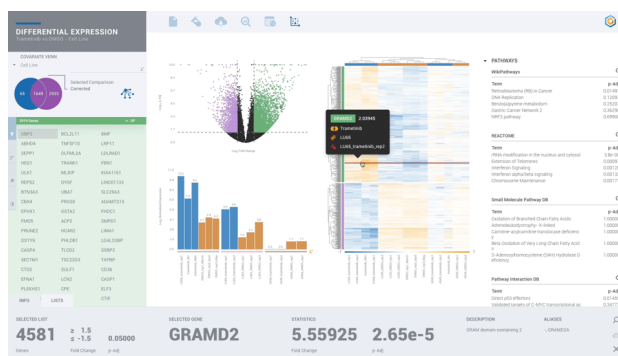
ROSALIND® Platform

A cloud-based system that enables scientists to analyze and interpret differential gene expression data without the need for bioinformatics or programming skills. ROSALIND makes analysis of nCounter data easy with guided modules for:

- Normalization
- Quality Control
- Individual Pathway Analysis

- Cell Type Profiling
- PlexSet™ Experiments
- Differential Expression
- Gene Set Analysis

nCounter cusomters can access ROSALIND at rosalind.bio/nanostring

Go Spatial

## Your portal to the Spatial Biology Revolution

Three Platforms. Unlimited Potential.

NanoString's integrated platforms and analytics can help tackle challenges and alleviate risks in the drug development process—from discovery to commercialization. Each platform with its uniquely

NanoString barcoded technology and distinct value supports the needs at each step in the process by providing biological insights and characterization on various scales.

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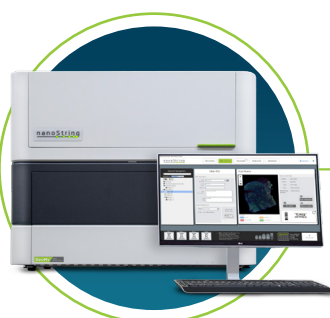
GeoMx®
Digital Spatial Profiler

CosMx™
Spatial Molecular Imager

Pair with GeoMx for spatial protein and RNA analysis

Enhance your nCounter data by adding spatial context: spatially profile expression of the whole transcriptome or targeted RNA and protein targets in distinct tissue structures and cell populations across FFPE or fresh frozen tissue sections.

nCounter® Analysis System
Product Specifications

FEATURE	SPECIFICATION	
	nCounter® Sprint Profiler	nCounter® Pro Analysis System
Level of multiplexing	800+ targets	
Recommended amount of starting material (dependent on assay and sample type)	RNA: 1-50 ng DNA: 5-30 0ng	RNA: 1-100 ng DNA: 5-300 ng
Sample types supported	Total RNA, cell lysates in GTIC, FFPE-derived total RNA and PAXgenelysed whole blood	
Reaction volume	Up to 35 µL	Up to 30 µL
Limit of detection 0.5 fM spike-in control	15 zeptomole spike in control in 15 µL hybridization	
Fold change sensitivity	> 1.5-fold (if > 5 copies per cell) >2-fold (if > 1 copy per cell) $R^2 > 0.95$	
Spike in correlation	$R^2 > 0.95$	
Linearity	Linear regression correlation coefficient $R^2 > 0.95$	
Linear dynamic range	6×10^5 total counts	
Controls	Assay dependent	
Hands-on Time	10 min	15 min
Processing Time	12 samples per 6 hours	Prep Station: 12 samples per 2.5 hours Digital Analyzer: 12 samples per 2.7 hours
Throughput	12-192** (1 cartridge x 2 runs/day)	12-576** (6 cartridges x 3 runs/day)
Expandable throughput	No	Yes, with additional Prep Station
Enterprise package features	No	Yes
Dimensions	107 x 72 x 82 cm	Prep Station: 67 x 89 x 63 cm Digital Analyzer: 66 x 66 x 48 cm
Weight	81.65 kg	Prep Station: 120 kg Digital Analyzer: 67 kg

* Option to increase capacity by adding a second Prep Station; accelerate cell line screening and high-throughput applications by running multiple samples per lane with nCounter PlexSet reagents

For more information, please visit nanostring.com/nCounter