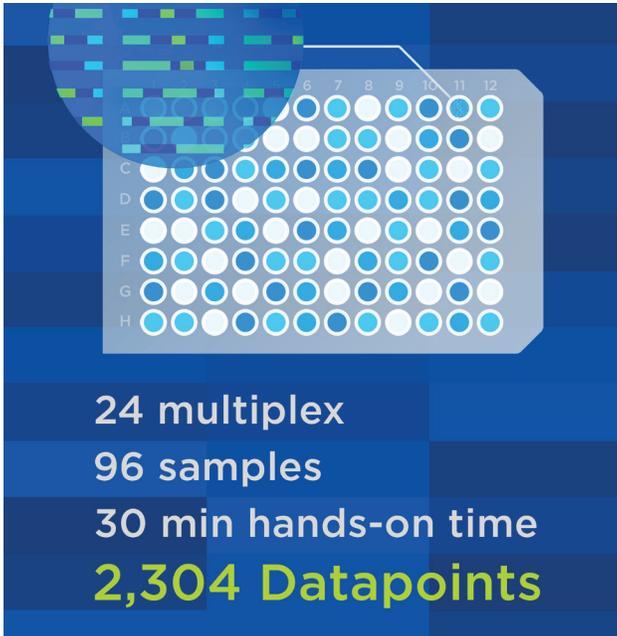


nCounter® PlexSet™ Reagents



24 multiplex
96 samples
30 min hands-on time
2,304 Datapoints

Product Highlights

- Multiplex up to 24 custom probes across 96 samples to generate 2,304 data points per run
- “Lyse-and-go” protocol for cells eliminates the need for RNA purification, reverse transcription, and amplification
- Digital gene expression provides accurate reproducible results
- No upfront probe optimization required
- Only 30 minutes of hands-on time; no need for cDNA conversion*, amplification*, or replicates

**Single cell protocol requires amplification*

Multiplexing Re-imagined

PlexSet technology enables multiplexed gene expression assays to be performed more efficiently and cost-effectively than ever before for projects ranging from 3 to 24 RNA targets. Unlike other gene expression technologies, PlexSet reagents enable researchers to reduce their hands-on time by eliminating the need for cDNA conversion, replicate utilization, or RNA purification**. Similar to other nCounter assays, PlexSet reagents provides a simple and robust method for multiplexing targets without the need to optimize probes or amplification conditions. The PlexSet reagents are based on proven nCounter technology utilizing molecular barcodes for highly multiplexed digital analysis.

By enabling up to 8 samples to be processed in a single lane on the nCounter cartridge, PlexSet reagents increase sample-throughput 8-fold. PlexSet reagents are compatible with a wide range of sample types including total purified RNA from FFPE samples and cell lysates (which can be processed with a simple “lyse-and-go” protocol). They are suitable for a wide variety of project types and can be used in any biological system where

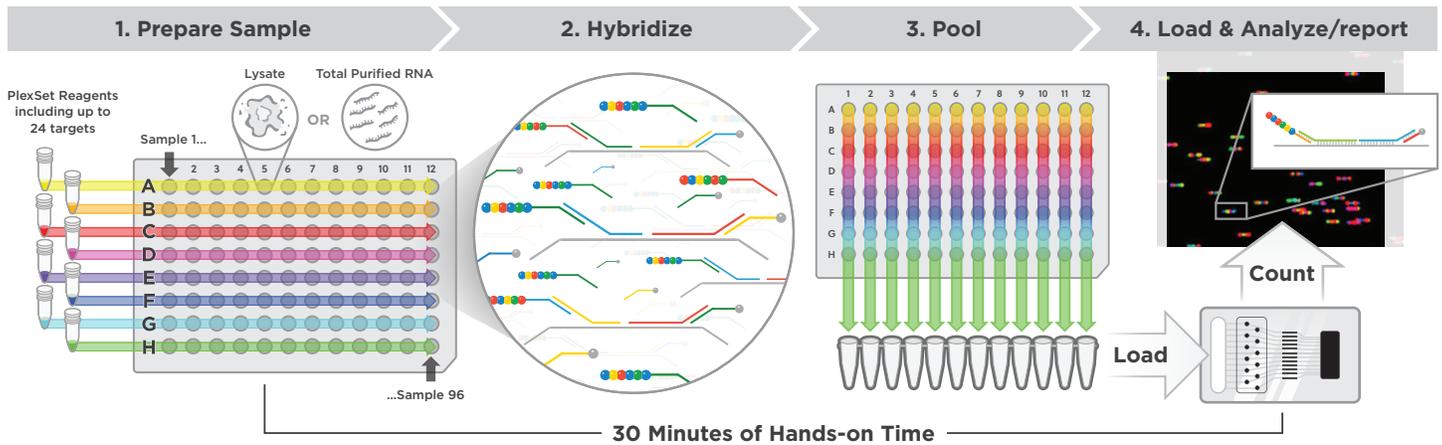
gene expression analysis is of interest. NanoString’s bioinformatics team designs custom probes based on gene-lists defined by the end-user. Widespread applications include cell screening, biomarker validation, drug screening, RNAi and CRISPR hit validation and phenotypic functional testing.

*** Using “lyse-and-go” protocol*

PlexSet Reagent Details

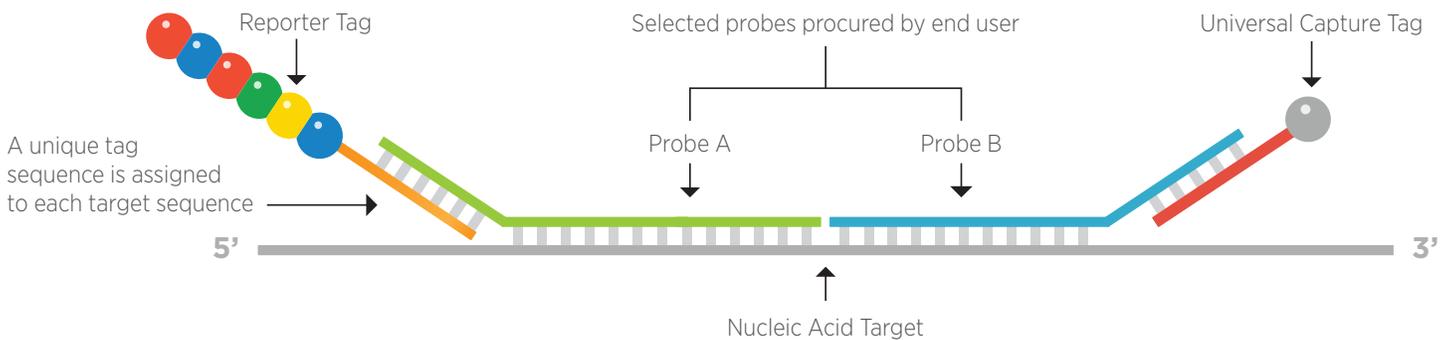
Minimum Input Material	50 ng of total purified RNA or 5,000 cells or 1 ng of RNA input with amplification
Hands-on Time	Approximately 30 minutes
Time to Results	24 Hours
Sample Types	<ul style="list-style-type: none">• Total purified RNA (cells or tissues)• Cell lysates• Fresh frozen or FFPE-derived RNA• Amplified RNA (single cell)
Data Analysis	nSolver™ Analysis Software (Research Use Only)

Figure 1: nCounter PlexSet workflow



Samples are prepared by either lysing the whole cells (utilizing “lyse-and-go” protocol) or by purifying the total RNA from a variety of sample types. Add up to 96 unique samples on a 96-well PCR plate. Add PlexSet A-H mixes containing the unique barcodes, hybridization buffer, internal reference controls, and oligos for up to 24 custom targets across each row. Hybridize the plate overnight. Then pool each row vertically into the strip tubes and load the assay in to the nCounter system to generate the digital counts. Utilize nSolver Analysis software to analyze the research results.

Figure 2: Probe design



Unique probe design enables direct digital counting and multiplexing capabilities

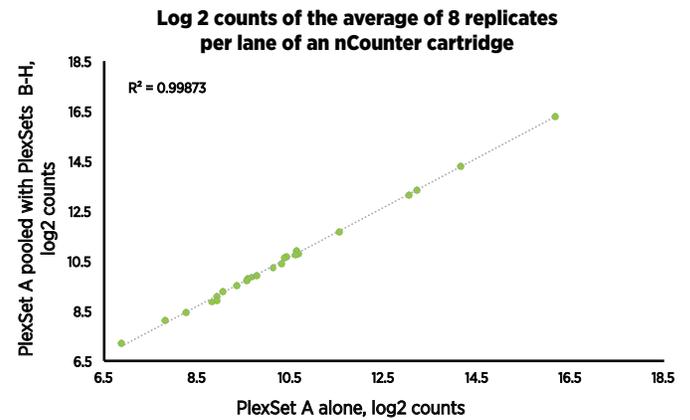
Figure 2 showcases the unique probe design for the PlexSet technology. Probes include both target-specific and tag specific sequences. These probes, based on NanoString’s patented technology, enable direct, digital counting of individual molecules with color-coded molecular barcodes via fluorescent microscopy and allow for high-precision counting of up to 24 target molecules across a sample set in

one reaction. The PlexSet chemistry is uniquely optimized to allow for up to 8 samples to be analyzed per nCounter cartridge lane. With this sample multiplexing capability, PlexSet reagents easily allow for hundreds of samples to be processed on a single nCounter instrument per day with sensitivity and specificity equivalent to standard nCounter gene expression chemistries.

Data from multiplexed samples and samples processed independently are highly correlated

Figure 3 shows 24-plex data from pooled samples is equivalent to 24-plex data from samples run independently. Not only does this validate the quality of data from PlexSet reagents, it also means that data from past studies with standard nCounter chemistry can easily be compared to new data generated with PlexSet reagents.

Figure 3: High correlation between multiplex and single plex samples



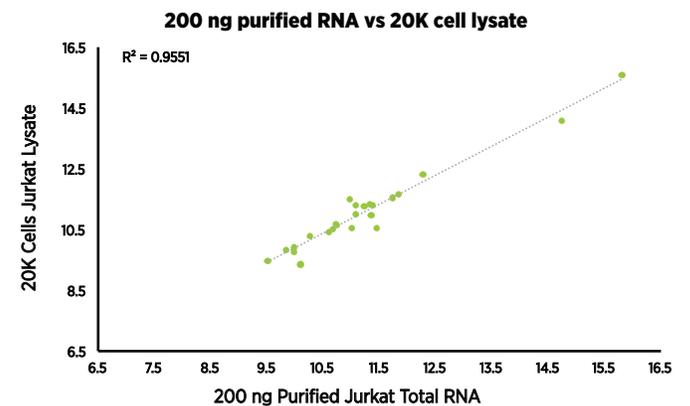
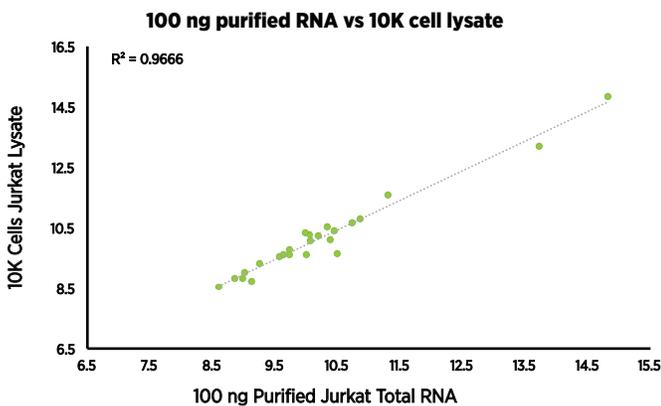
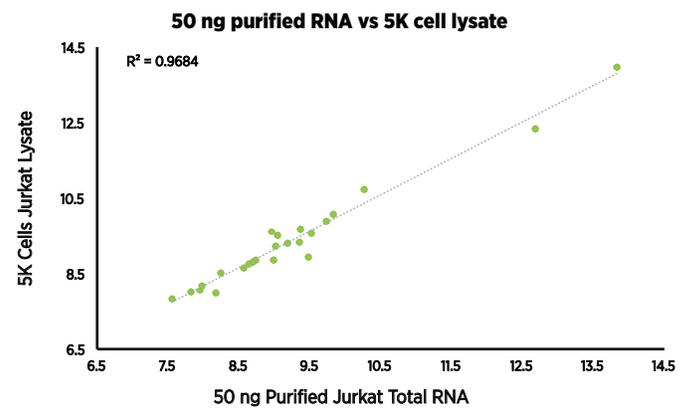
“Lyse-and-go” protocol for cell samples

The protocol offers a simple workflow to lyse cells with the nCounter Buffer LH and to directly use them as samples in the experiment to attain specific and sensitive gene expression analysis.

The “lyse-and-go” protocol helps researchers save time and resources. Figure 4 showcases three graphs demonstrating high concordance between 5,000-20,000 lysed cells and 50-200 ng total purified RNA from Jurkat cells using PlexSet technology.

Figure 4: High correlation between cell lysate and corresponding purified total RNA

Log 2 counts of the average of 8 replicates per lane of an nCounter cartridge



Ordering Information

Product	Product Description	Catalog Number	Unit
nCounter PlexSet-12 Reagent Pack	For custom Gene Expression analysis utilizing 12 genes and 96 samples per nCounter run. Each pack of reagents is sufficient for 2 nCounter runs or 192 assays and requires 24 reaction Master kit. Tier discounting is available for purchase of 4 packs or more (768 samples or more). PlexSet purchases only—does not include Master Kits.	PS-012-GX-192S (CS0)	192 Assays
nCounter PlexSet-24 Reagent Pack	For custom Gene Expression analysis utilizing 24 genes and 96 samples per nCounter run. Each pack of reagents is sufficient for 2 nCounter runs or 192 assays and requires 24 reaction Master kit. Tier discounting is available for purchase of 4 packs or more (768 samples or more). PlexSet only—does not include Master Kits	PS-024-GX-192S (CS0)	192 Assays
nCounter PlexSet Titration Kit-12	Kit is set up to perform titration for 12-gene format prior to processing samples with PlexSet-12 reagents in 96 sample format. Only one kit is required for the entire project. CodeSet only—does not include Master Kits	PS-GX-PTK-12 (CS0)	24 Assays
nCounter PlexSet Titration Kit-24	Kit is set up to perform titration for 24-gene format prior to processing samples with PlexSet-24 reagents in 96 sample format. Only one kit is required for the entire project. CodeSet only—does not include Master Kits	PS-GX-PTK-24 (CS0)	48 Assays
Buffer LH Bottle (50 ml)	Buffer LH is a lysis buffer optimized to lyse cells and utilize them directly with PlexSet reagents to enable a “lyse-and-go” protocol. One 50 ml bottle is sufficient to analyze samples for 8 plates (4 pack or 768 samples) of PlexSet reagents.	PS-GX-BLH	50 ml Bottle

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