

# nCounter® Gene Expression Panels Overview

MAN-10083-03

The nCounter Gene Expression (GX) panels simplify gene expression analysis with curated content covering up to 770 RNA targets that were selected for published significance in key biological pathways. All off-the-shelf GX panels are customizable through the Panel Plus option, which allows the spike-in of additional genes of choice. The nCounter Analysis Systems provides a simple workflow optimized for robust performance on challenging samples such as FFPE and lysate.

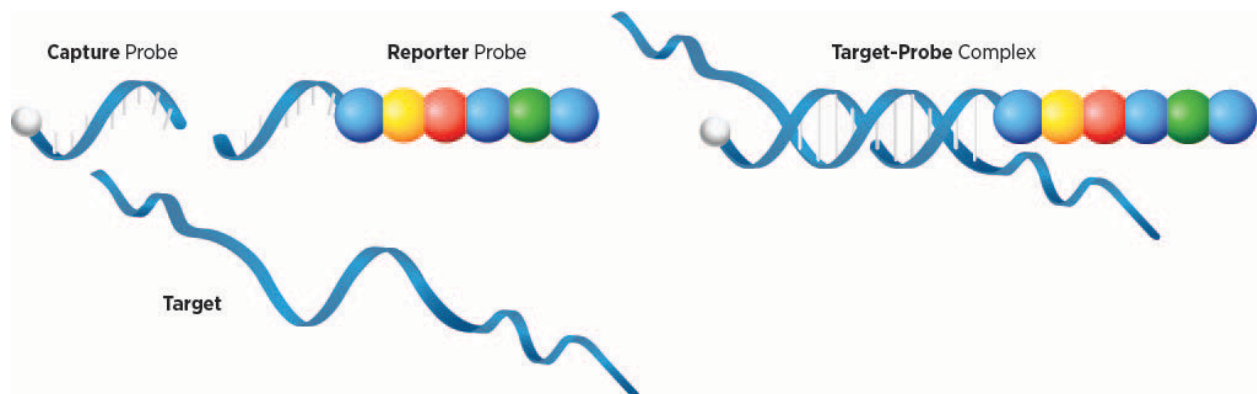
## nCounter Assay Overview

NanoString's nCounter technology is based on digital detection and direct molecular barcoding of individual target molecules using a unique probe pair for each target of interest. Digital images are processed within the nCounter instrument, and the Reporter Probe counts are tabulated in a comma separated value (CSV) format for convenient data analysis with NanoString's free nSolver™ Analysis Software, the ROSALIND™ cloud platform, or other software package of your choosing.

nCounter technology makes lab work and sample analysis a streamlined process with limited experimental variables. This results in very precise and accurate measurements of gene expression, enabling the rapid collection of data on your targets of interest with minimal effort.

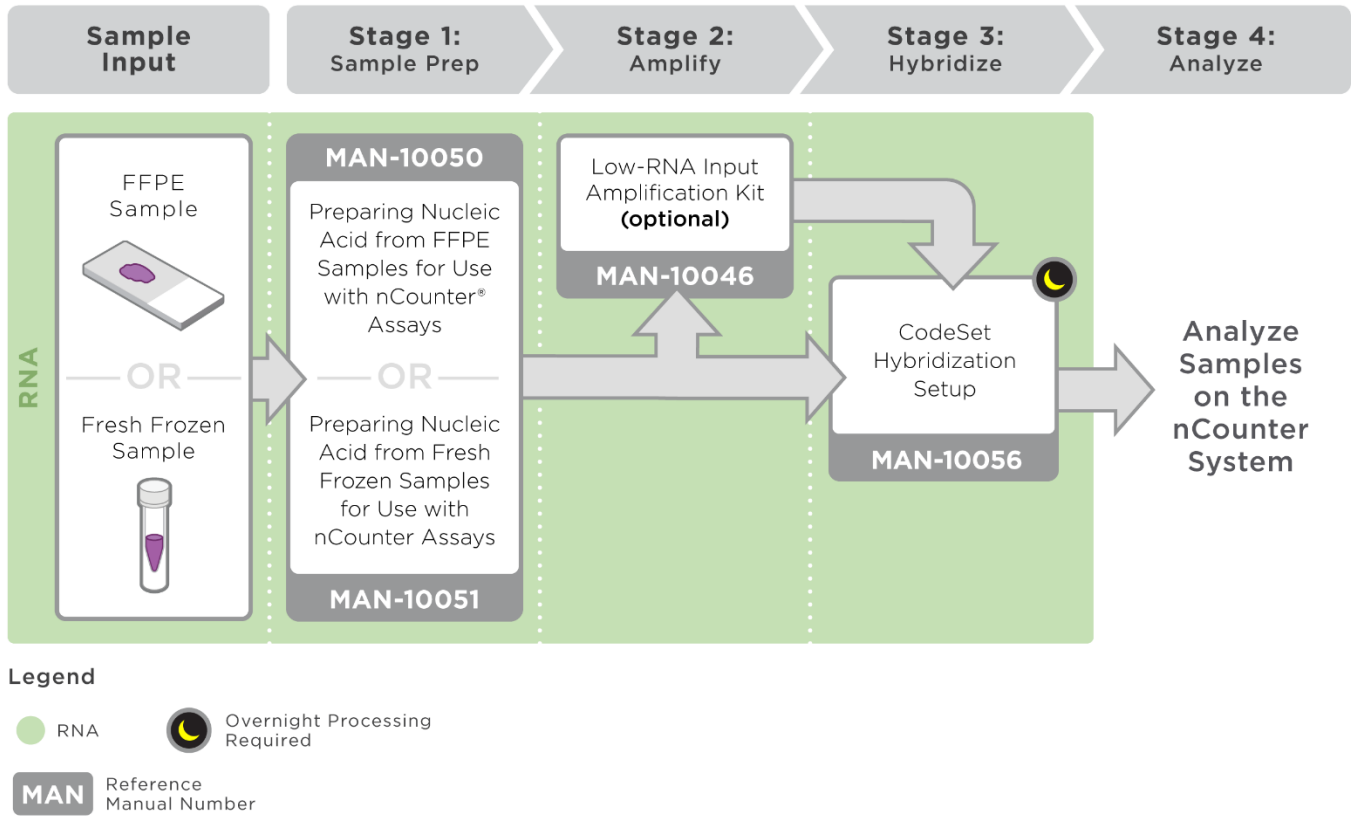
## nCounter CodeSet Chemistry

NanoString's nCounter CodeSet chemistry utilizes target-specific Reporter and Capture Probes, collectively referred to as a CodeSet. Each probe pair consists of a color-coded Reporter and a Capture Probe that each include a covalently attached stretch of target-specific sequence (**Figure 1**). During an overnight hybridization, the Reporter and Capture Probe hybridize to their specific single-stranded RNA or DNA target molecule.



**Figure 1.** Capture and Reporter Probes hybridize with a single-stranded target (left) to form a double-stranded probe-target complex (right).

## Product Workflow



**Figure 2.** Workflow for the nCounter Gene Expression Panels.

## Materials and Supporting Documents

**Table 1.** Materials provided in an nCounter Gene Expression Panel

Panel	Reagents	Storage
nCounter Gene Expression Panels: <ul style="list-style-type: none"> <li>• See our <a href="#">Gene Expression Panels page</a> for panels and catalog numbers</li> <li>• Customize off-the-shelf panels using <a href="#">Panel Plus</a></li> <li>• For custom panels, including different species, contact <a href="mailto:orders@nanosttring.com">orders@nanosttring.com</a></li> </ul>	Reporter Probe pool (specific to the panel chosen)	-80°C
	Capture Probe pool (specific to the panel chosen)	-80°C

**NOTE:** Please reference the manuals listed in Table 2 for additional required materials and reagents.

**Table 2.** Supporting Documents

Step	Manual	Protocol
Nucleic Acid Extraction	<a href="#">MAN-10050</a>	<a href="#">Preparing RNA from FFPE Samples</a>
	<a href="#">MAN-10051</a>	<a href="#">Preparing RNA and Lysates from Fresh Frozen Samples</a>
RNA Amplification (optional)	<a href="#">MAN-10046</a>	<a href="#">Low RNA Input Kit</a>
Hybridization	<a href="#">MAN-10056</a>	<a href="#">Gene Expression Panels and Custom CodeSet</a>
Instrument Operation	<a href="#">MAN-10147</a>	<a href="#">nCounter Pro Analysis System User Manual</a>
	<a href="#">MAN-C0035</a>	<a href="#">nCounter Analysis System User Manual for MAX/FLEX Systems</a>
	<a href="#">MAN-10017</a>	<a href="#">nCounter SPRINT Profiler User Manual</a>
Data Analysis	<a href="#">MAN-C0011</a>	<a href="#">Gene Expression Data Analysis Guidelines</a>
	<a href="#">MAN-10030</a>	<a href="#">nCounter Advanced Analysis 2.0 User Manual</a>
	<a href="#">MAN-C0019</a>	<a href="#">nSolver 4.0 Analysis Software User Manual</a>

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**For more information, please visit [nanosttring.com](https://nanosttring.com)**

**NanoString Technologies, Inc.**

530 Fairview Avenue North  
Seattle, Washington 98109

T (888) 358-6266  
F (206) 378-6288

[info@nanosttring.com](mailto:info@nanosttring.com)

**Sales Contacts**

United States: [us.sales@nanosttring.com](mailto:us.sales@nanosttring.com)  
EMEA: [europa.sales@nanosttring.com](mailto:europa.sales@nanosttring.com)

Asia Pacific & Japan: [apac.sales@nanosttring.com](mailto:apac.sales@nanosttring.com)  
Other Regions: [info@nanosttring.com](mailto:info@nanosttring.com)