nCounter Gene Expression Panels

The nCounter® Gene Expression panels simplify gene expression analysis with curated content covering up to 770 RNA targets that were selected for published significance in key biological pathways. They are customizable with the Panel Plus option, which allows you spike in up to 30 more genes of your choosing into any off-the-shelf GX panel. The nCounter® Analysis System 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 or the application of your choice.

nCounter technology makes lab work and sample analysis a simple process by limiting the variables in experiments. The result is very precise and accurate measurements of gene expression, enabling you to gather data on your targets of interest rapidly with minimal intervention.

nCounter CodeSet Chemistry

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

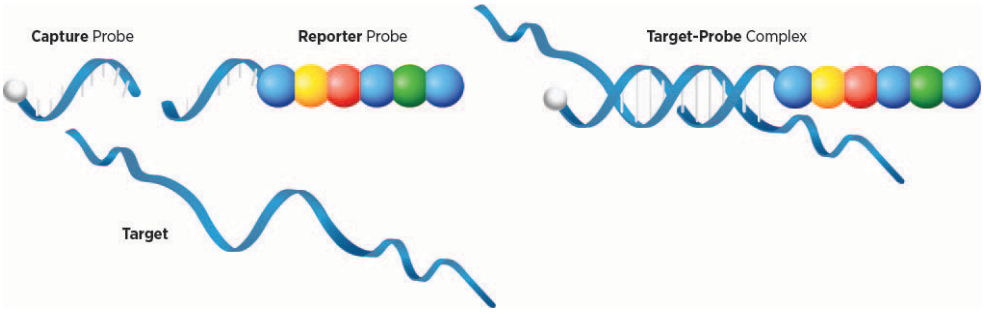

Figure 1. Capture and Reporter Probes (left) hybridize with a single-stranded target to form a double-stranded probe-target complex (right).

Product Workflow

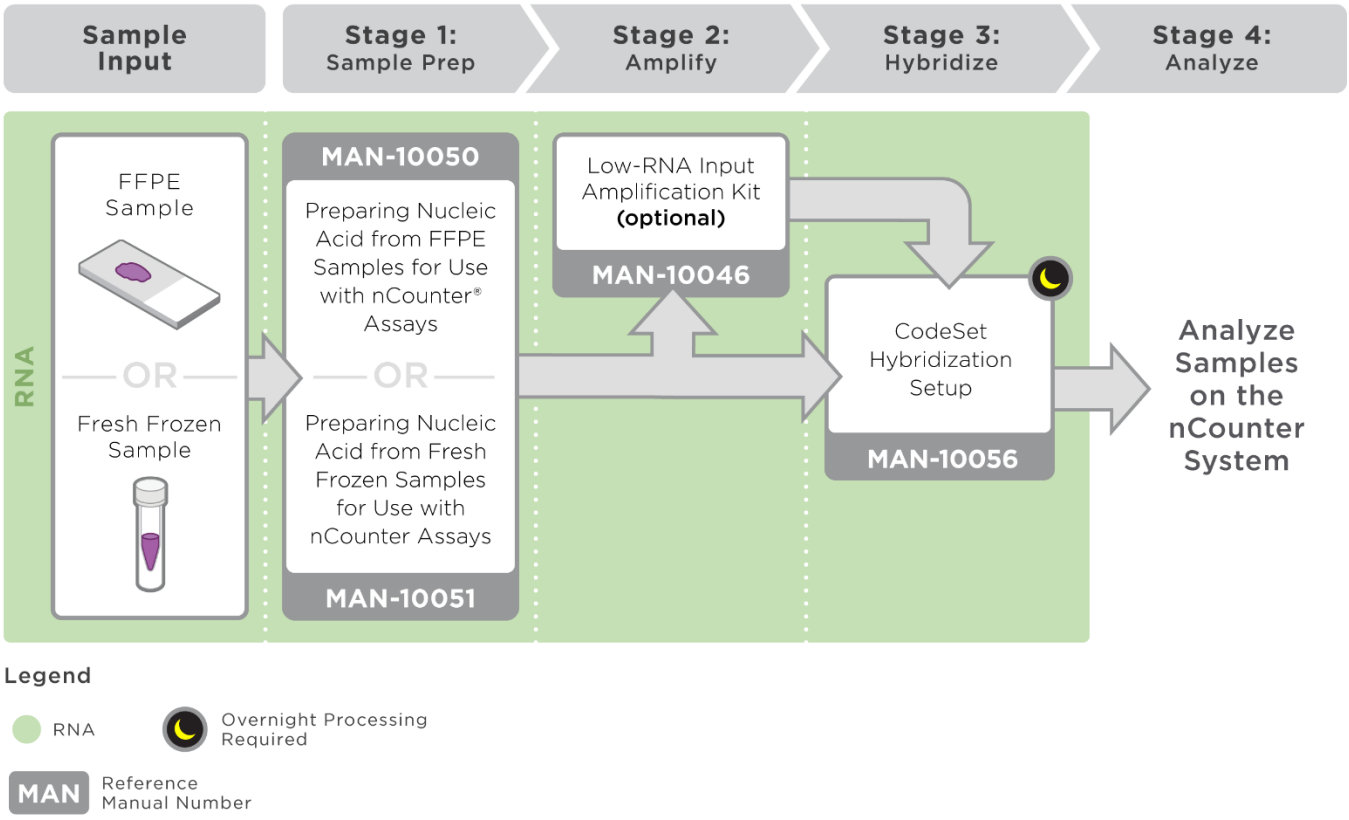

Figure 2. Workflow for the nCounter Gene Expression Panels

Materials and Supporting Documents

Table 1. Materials provided in an nCounter Gene Expression Panel

Panel	Reagents	Storage
nCounter Gene Expression Panels: • See our Gene Expression Panels page for panels and catalog numbers • For custom panels, including different species, contact orders@nanostring.com	Reporter Probe pool (specific to the panel chosen)	At or below -80°C
	Capture Probe pool (specific to the panel chosen)	At or below -80°C

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

Table 2. Supporting Documents

Step	Manual	Protocol
Nucleic Acid Extraction	MAN-10050	Preparing Nucleic Acid from FFPE Samples for Use with nCounter Assays
	MAN-10051	Preparing Nucleic Acid and Lysate from Fresh/Frozen Samples for Use with nCounter Assays
RNA Amplification (optional)	MAN-10046	Low RNA Input Amplification Kit
Hybridization	MAN-10056	CodeSet Hybridization Setup

Intellectual Property Rights

Limited License