

The Evaluation of NanoString[®] Technologies nCounter[®] Platform's Robustness and Sensitivity to Enable Multiplexed Gene Expression Analysis of Clinical Samples

Background

In clinical translational research biomarker discovery requires a robust and sensitive method for multiplexing and analyzing gene expression in diverse tissue types with varying sample quality.

Research Question

What is the performance of the nCounter[®] platform on key clinical concerns including: technical and biological replicates, sample quality, sample quantity, stability for cartridges and CodeSets, freeze-thaw, and lot-to-lot variability?

Results & Conclusions

- The nCounter[®] system meets all performance criteria to qualify as a reliable platform for clinical trial samples as determined through extensive testing by a major biopharmaceutical company.
- When testing the platform for: technical and biological replicates, sample quality, sample quantity, stability for cartridges and CodeSets, freeze-thaw, and lot-to-lot variability, the platform provided high quality, reproducible data.

Experimental Setup

Sample Type	Fresh; frozen; FFPE
Tissue Type	Human lung; DLBCL; prostate; gastric
Assay	Custom CodeSet
Analyte	RNA
Instrument	nCounter [®] Analysis System

“We found the practical aspect of using the nCounter platform favorable over any other technique used (11) with minimal time needed and reduced margin for user error due to few handling steps during the preparation of reactions.”

“Overall, this study demonstrates that nCounter technology offers several key advantages, including sensitivity, technical reproducibility, and robustness for analysis of FFPE samples....”

Veldman-Jones et. al.



nCounter Platform

The nCounter technology MAX/FLEX and new nCounter Pro Analysis System offer several key advantages when working with low quality RNA from FFPE samples including sensitivity, technical reproducibility, robustness, ease of use, hands-on analysis time, and utility for clinical application.

Veldman-Jones M., Brant R., Rooney, C. et al. Evaluating Robustness and Sensitivity of the NanoString Technologies nCounter Platform to Enable Multiplexed Gene Expression Analysis of Clinical Samples. *Cancer Research*. 75 (13), 2587-2593 (2015). <https://doi.org/10.1158/0008-5472.CAN-15-0262>

For more information, please visit nanosttring.com/nCounterPro

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