

NanoString Applications

mRNA Assay

Standard analysis of mRNA expression levels requires 100 ng purified total RNA or cell lysate from 10,000 cells. A modified protocol for single cell analysis is available. NanoString has a number of [pre-built assay panels](#) for both human and mouse mRNA pathways. [Custom codesets](#) can be designed and ordered for other pathways or species of interest. Minimum custom order is 48 reactions.

miRNA Assay

Off the shelf panels are available for human, mouse, rat, and fly miRNA profiling of >800 miRNA sequences. Recommended input is 100 ng of total RNA. Cell lysates are not compatible with this application. See [NanoString](#) to download target lists.

miRGE Assay

Nanostring is the only technology to date that can analyze expression levels of both message and micro RNA simultaneously in a single reaction. Custom miRGE panels start at 5 miRNA and 100 mRNA assays with additional assays of either type up to 800 total targets possible. Recommended input is 100 ng of total RNA. Cell lysates are not compatible with this application.

Copy Number Variation Assay

Design a custom probe panel to measure DNA copy number in up to 800 regions. A reference sample of known copy number is required for accurate analysis. This assay requires 200-600 ng of high purity gDNA that is >1 kb in length.

Other Applications

[NanoString](#) can also be used to assess abundance of lncRNA in total or precipitated RNA, in parallel with mRNA or alone. Complex cellular mechanisms can be studied through the simultaneous analysis of human gene expression and protein response using disease specific nCounter® RNA:Protein panels. The ChIP-string assay can be used to verify ChIP-Seq discoveries.