

**The Singular Genomics G4 Sequencing Platform offers rapid, cost-effective RNA sequencing (RNA-Seq) with four flow cell flexibility and single-day run times.**

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RNA sequencing (RNA-Seq) has become a common quantitative assay to determine relative transcript abundance. However, technical advancements in the performance of sequencing technologies and their associated reagents, in addition to an overall reduction in costs, are needed to improve access to this technology and enable the expansion of its development and application. For example, current commercial sequencing platforms require the use of large-scale runs to maintain cost-effectiveness, preventing the use of smaller sample runs.

The Singular Genomics G4 Sequencing Platform offers rapid, cost-effective RNA sequencing (RNA-Seq) with four flow cell flexibility and single-day run times. However, the utility of new RNA library preparation reagents that allow rapid and complete transcriptome profiling have not been fully explored with the new G4 Sequencing Platform. Here, we demonstrate the compatibility of the Bio-Rad Laboratories, Inc. SEQuoia Complete Stranded RNA Library Prep Kit and the SEQuoia Express Stranded RNA Library Prep kit for RNA sequencing library preparation, with the G4 Sequencing Platform.

Highly accurate RNA sequencing data were obtained for both low and high input RNA samples. Results show the ability to obtain high-quality and accurate gene expression data for use in transcriptomic profiling, including the identification and quantification of novel transcripts, as well as the assessment of long noncoding RNAs (lncRNAs) and miRNAs. Furthermore, the data generated using the G4 Sequencing platform correlated well with data obtained using the Illumina, Inc. NextSeq 500 Sequencing System. Thus, the G4 Sequencing Platform is a well-suited alternative sequencing platform for use with the SEQuoia portfolio of library preparation kits.