mirxes | genomics

Actionable. Accessible. Affordable.

# **RNA Sequencing**

## Reduce the Cost of Sequencing To Maximise your Research Output

RNA sequencing (RNA-Seq) is an indispensable tool for transcriptomewide analysis of differential gene expression and structural analysis of RNAs.

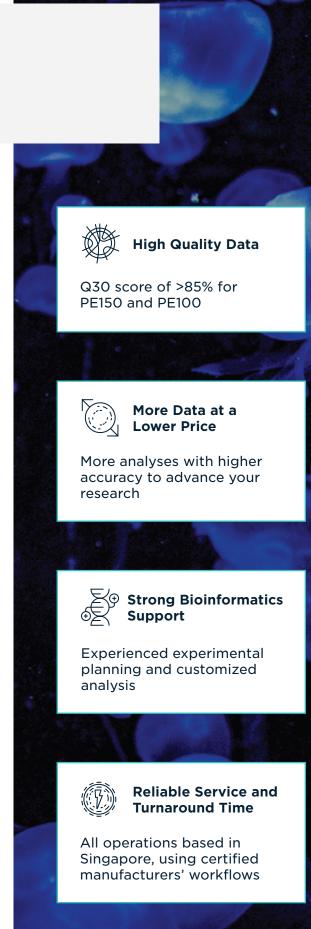
Mirxes Genomics offers an efficient package for rRNA depletion with synthesis of cDNA libraries from a wide input range of total RNA. These libraries are then sequenced using DNA nanoball sequencing technology, generating high quality data for comprehensive analysis of gene expression analysis and discovery of alternative splicing events, gene fusions and other transcriptomic aberrations.



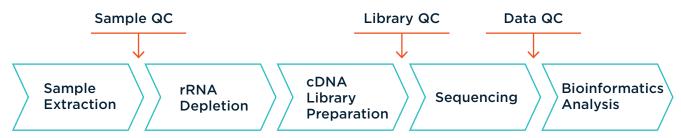
"I am impressed with the quality of data, level of service and cost effectiveness provided by the Mirxes team. Their customer centric approach makes the entire experience very smooth and pleasant."

#### **Professor Liu Jianjun**

Deputy Executive Director Genome Institute of Singapore A\*STAR



### **RNA-Seq Service Workflow**



| Suggested Sequencing Depths  | Sequencing Platforms | Turnaround Time            |  |  |
|--|----------------------|----------------------------|--|--|
| Deep gene expression<br>analysis<br>≥40M reads (≥12Gb)               | DNBSEQ-T7            | 2-4 weeks from successful  |  |  |
| Novel transcripts,<br>alternative splicing analysis<br>≥100M (≥30Gb) |                      | sample QC to data delivery |  |  |

| Service                  | Sample Type | Sample Source                                    | Optimum Input<br>Amount | Volume  | Concen-<br>tration | Purity and Quality  |
|--------------------------|-------------|--|-------------------------|---------|--------------------|---|
| RNA-Seq                  | Total RNA   | Fresh frozen tissue, cell<br>line, saliva, blood | ≥ 500 ng                | ≥ 20 µl | ≥ 20 ng/µl         | OD260/280 = 1.8 - 2.0<br>OD 260/230 ≥ 2.0<br>RIN ≥ 6                |
|                          | Total RNA   | FFPE   | ≥ 500 ng                | ≥ 20 µl | ≥ 20 ng/µl         | OD260/280 = 1.8 - 2.0<br>OD 260/230 ≥ 2.0<br>DV200 > 50%<br>RIN ≥ 2 |
| RNA-Seq<br>(Directional) | Total RNA   | Fresh frozen tissue, cell<br>line, saliva, blood | ≥1ug                    | ≥ 20 µl | ≥ 20 ng/µl         | OD260/280 = 1.8 - 2.0<br>OD 260/230 ≥ 2.0<br>RIN ≥ 6                |
|                          | Total RNA   | FFPE   | ≥1ug                    | ≥ 20 µl | ≥ 20 ng/µl         | OD260/280 = 1.8 - 2.0<br>OD 260/230 ≥ 2.0<br>DV200 > 50%<br>RIN ≥ 2 |

Please note that these requirements serve only as a guide. Please contact us for further assessment if your samples do not meet the requested amounts.

### Bioinformatics Analysis and Support

## **Standard Analysis Package**

- Data Quality Control: Filtering reads with adapter or low-quality sequence data
- Alignment to reference genome
- Summary statistics
- Gene count matrix
- Differential gene expression analysis (DEGs)
- GO enrichment analysis of DEGs
- KEGG enrichment analysis of DEGs

## Secondary Analysis Package

- Data Quality Control: Filtering reads with adapter or low-quality sequence data
- Alignment to reference genome
- Summary statistics
- Gene count matrix

#### Additional Tertiary Analysis

- Gene ontology enrichment
- Biomarker prediction
- Full annotations
- Pathway analysis
- Many other options!

### Contact Us

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