

Single-Cell RNA Sequencing Pipeline

Wet Lab

Sample Preparation

- + Gross Dissection
- + Dissociate Cells

Library Preparation

- + Extract RNA
- + Add Barcodes
- + Add UMIs
- + PCR Amplification
- + cDNA Fragmentation
- + cDNA Enrichment

Sequencing

- + System and Reagent Check
- + Load Sample and Program System
- + Quality Check Sample Metrics

Dry Lab

GrCh38 Reference Mapping

- + Check Read Q score (FastQC)
- + Filter Reads by Knee Plot
- + Create Count Matrices
- + Inspect Sample Read Count

ScVelo

- + Differential Velocity
- + Visualisation

Seurat, SingleR, (DropletUtils)

- + Cell Type Annotation
- + Differential Expression
- + Visualisation

IGViewer and Custom Tools

- + Visualize Coverage
- + Visualize Target Features