Singleron Matrix NEO®: Automated Single Cell Processing System

The NEO instrument can be used as an integrated part for the preparation of single-cell sequencing libraries. The instrument can dispense the single cells in suspension into the high-density microwell array of the SCOPE-chip, and automatically complete the chip priming, cell separation, cell lysis, and mRNA capture steps. It greatly simplifies the operation process of single cell sequencing library construction and reduces manual steps.

The NEO provides a fast and reliable way separate cells with low amount of doublets and with high reproducibility. Up to 15,000 cells per sample can be captured on a single chip. The stable, automated process is suitable for multi- omics research, including whole transcriptome profiling, single nucleus sequencing, immune repertoire profiling, generation of targeted libraries and time-resolved transcriptomics.

Figure 1: The Matrix NEO® instrument

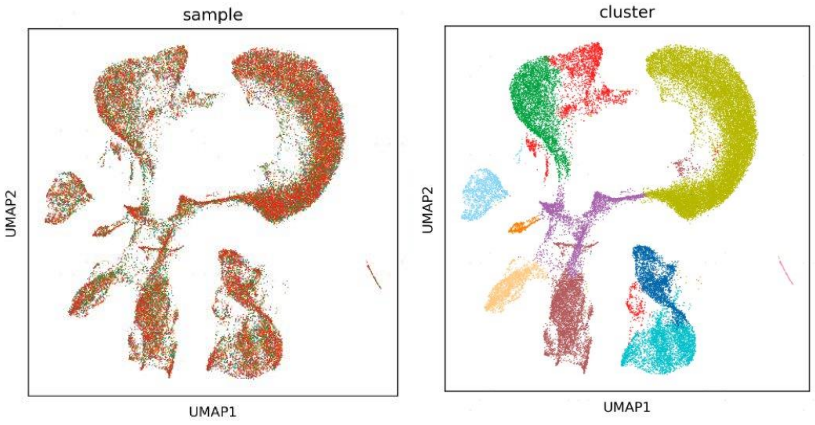
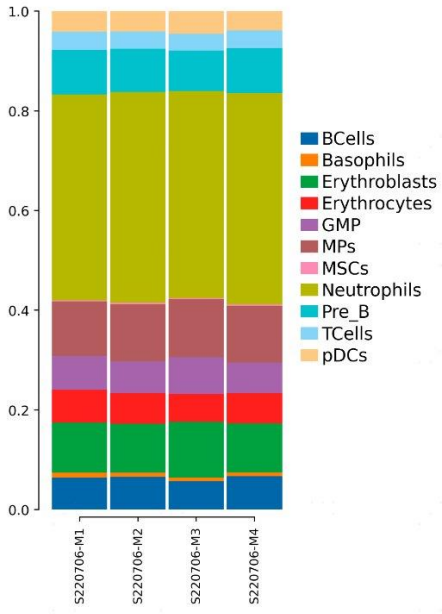


Figure 2: Using NEO, four replicates of PBMC samples processed in the same run are shown. Each cluster is made out of even representative from each sample (shown in 4 colors). The high correlation demonstrates the stability of the system.



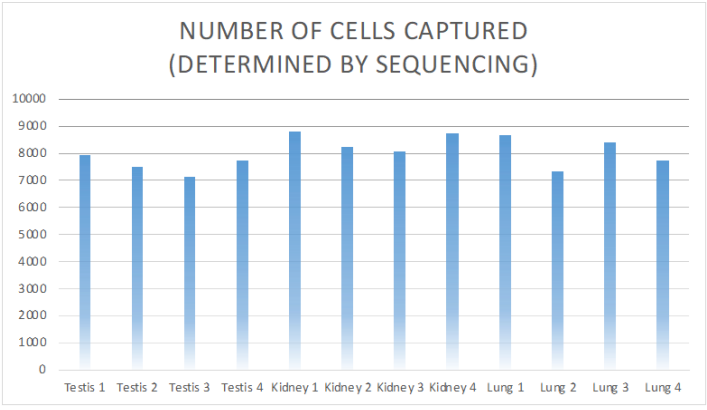


Figure 3: Summary of 3 NEO runs, each using 4 replicates, with different tissues (mouse testis, kidney, and lung). The coefficient of variation is 6.98%. The expected number of cells captured is around 8000, when loading 30K cells.

Singleron Matrix NEO®: Unique Features

Singleron Matrix NEO® is a well based single cell sequencing system with walk-away automation

As a well based system:

- the cell partitioning does not rely on a stable oil formation
- the cell partitioning does not rely on a pressurized system, therefore reducing the risk of
- it has low doublet rate
- it uses magnetic barcoding beads to capture RNA

As an automated solution:

- it's intuitive and straightforward
- it automates all steps for the capture of genetic materials, including priming, cell loading, barcoding, washing and lysis

Up to 4 chips processed in parallel, with a running time of 38min.

Up to 15000 (SD format) or 25000 (HD format) cells can be processed per chip. Chip format can be individually selected for each lane in the same run.

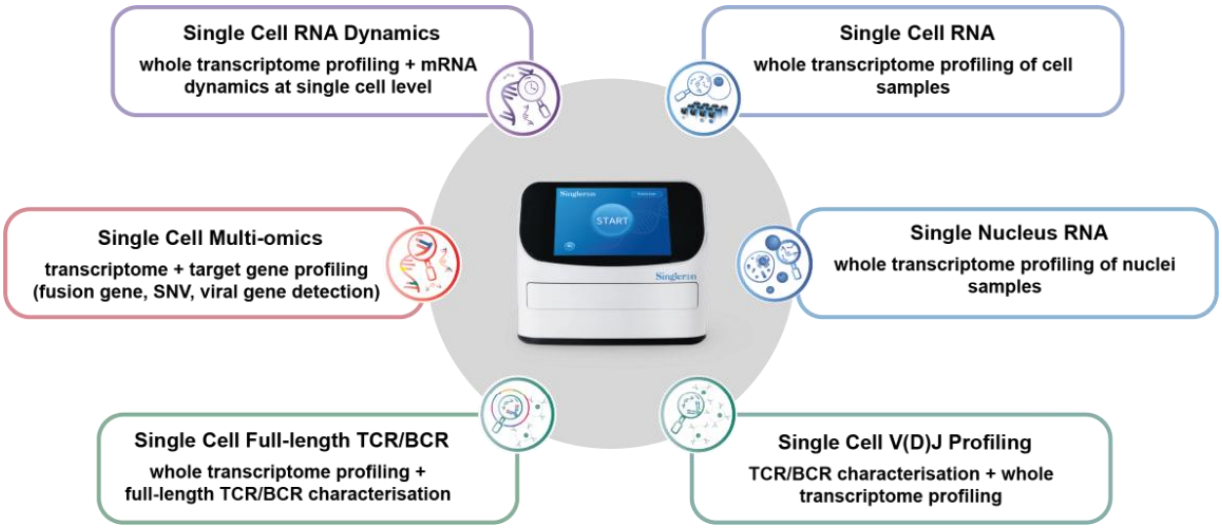


Figure 4: Products compatible with Matrix NEO. All kits are offered in 4 reactions and 16 reactions format.

Ordering information:

Product	Reactions	Catalog Number
Singleron Matrix NEO® Automated Single Cell Processing System	N/A	MT1201001
Singleron Matrix NEO® - Loan (monthly)	N/A	SI005

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