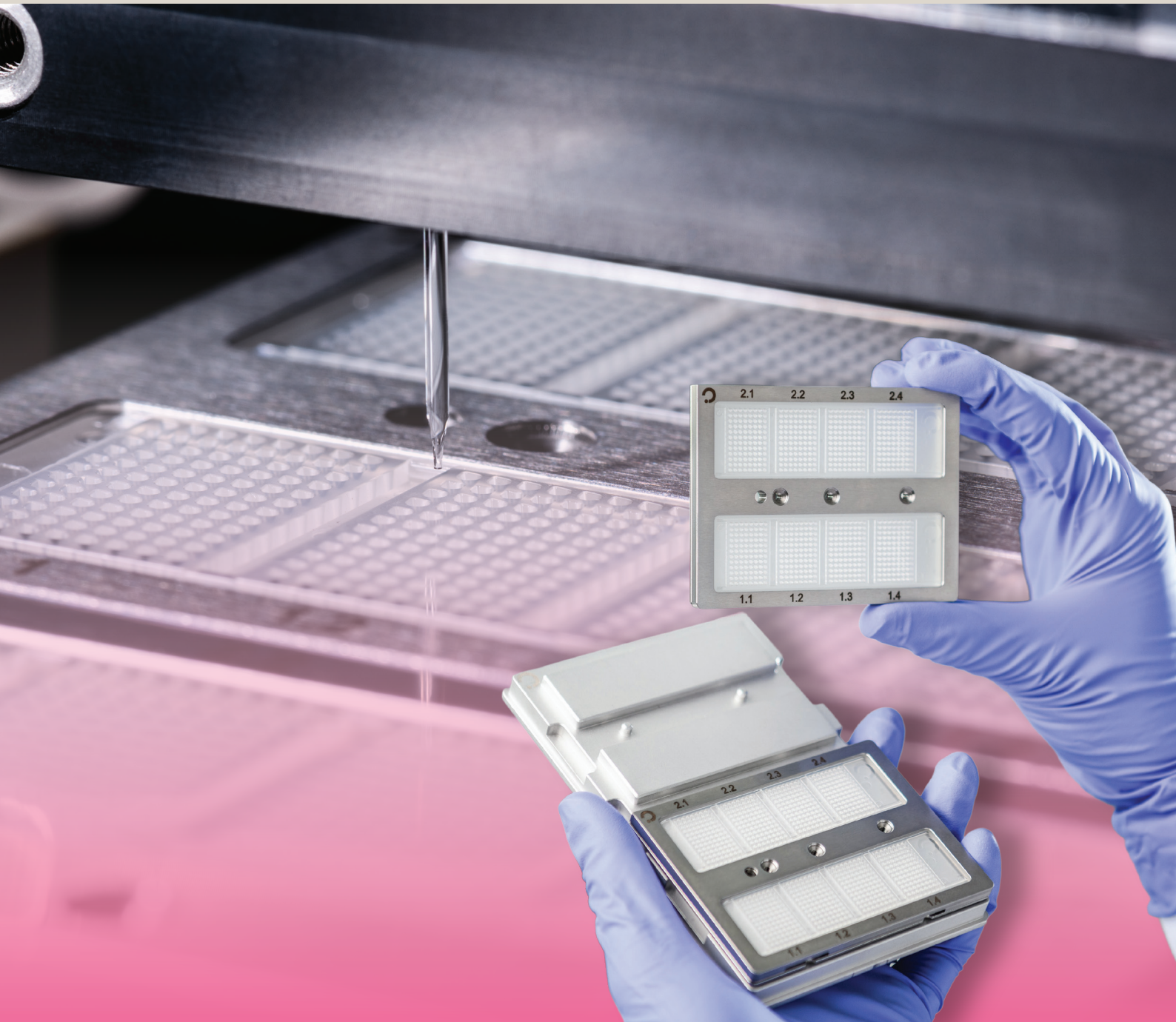


cellenCHIP 384-3'RNA-Seq Kit

Miniaturized library preparation starting from single cells



About cellenCHIP 384-3'RNA-Seq Kit

The study of entire transcriptomes using RNA sequencing (RNA-seq) has become routine in biomedical research. To date, RNA-seq is mostly performed in bulk, representing average gene expression patterns across thousands to millions of cells. Whereas bulk studies are limited in analyzing heterogeneity of samples, single cell RNA-seq (scRNA-seq) overcomes these barriers by providing insights into differences between individual cells, such as in cancer biology, where various cell types contribute to normal and disease processes.

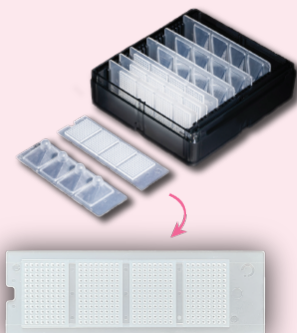
The cellenCHIP 384-3'RNA-Seq Kit enables highly sensitive transcriptomic analyses of individual cells in nanoliter volume in combination with the cellenONE® single cell isolation and dispensing platform.

Each kit contains 4 cellenCHIP 384s RTready and all reagents and consumables for library preparation

Provided with 4 different sets of Illumina compatible library indices allowing multiplexing of up to 16 libraries (6144 cells)

The cellenCHIP 384s RTready are preloaded with unique oligo-dT-Primer comprising of a cell and molecular barcode, Lysis Buffer and RT Mix.

cellenCHIP 384
3'RNA-Seq Kit



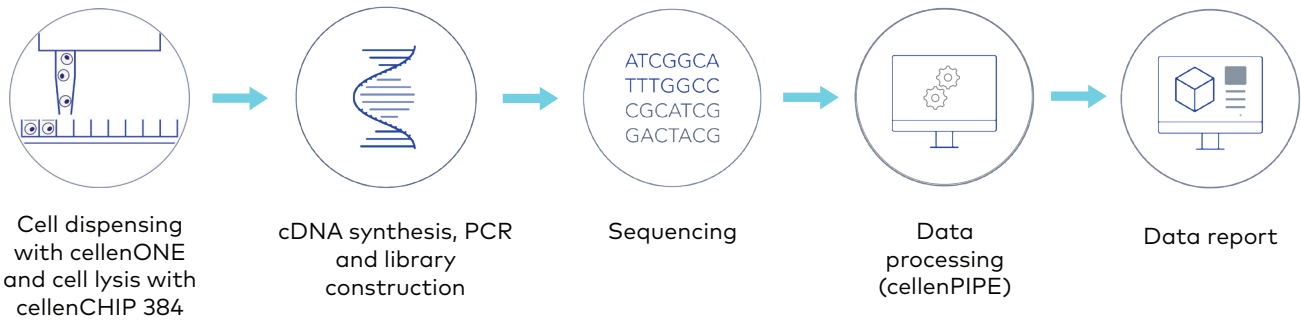
cellenONE®
single cell isolation
and dispensing
platform



The combination of cellenONE® and the cellenCHIP 384-3'RNA-Seq Kit enables the:

- Analysis of 96 up to 1536 single cells per run
- Handling of diverse sample types: including cell lines, primary cells, rare cells CTC, cell subtypes, dissociated fresh or frozen tissue and nuclei
- Use of a wide range of cell sizes and shapes

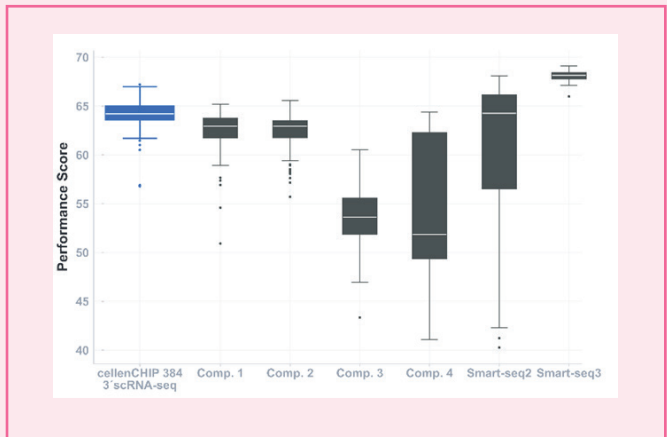
Efficient & streamlined workflow for transcriptomic analysis of cells



Benefits

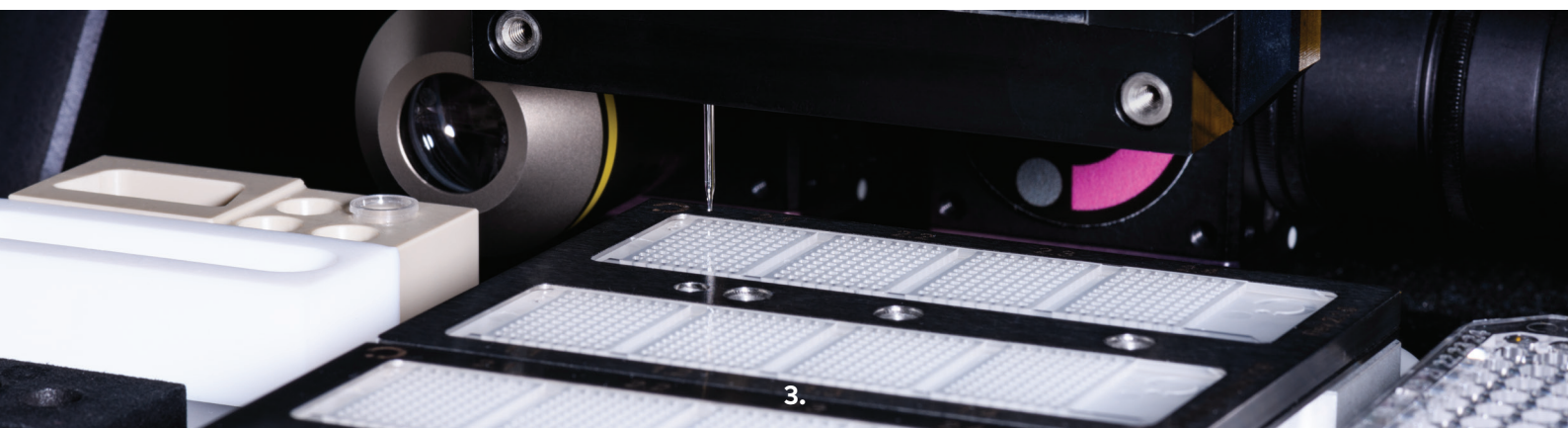
- **Best in class:**
 - Global performance surpassing current gold standard
 - >7000 genes detected with only 150,000 reads per single cell
 - Only a 100 cells needed to do clustering analysis
- **Ease of use:** Supplied with all reagents to go from cells to ready-to-sequence libraries
- **Cost-effective:** Miniaturization of reaction to reduce cost of reagents
- **Scalable:** From 1 to 1000s of cells in a perfectly controlled manner

For more info please check our Application Note on our official website



Performance of cellenCHIP 384- 3'RNA-Seq Kit in comparison to other technical solutions.

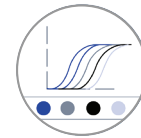
Quality of data generated with the cellenCHIP 384- 3'RNA-Seq Kit is compared to four different commercial solutions, and the standard Smart-seq2 & Smart-seq3 protocols. Comparison is based on rigorously similar datasets found in literature: HEK cells sequenced at 20K reads/cells. The performance score is generated by combining 7 different quality and performance parameters commonly used for data validation: mapping rate, Fraction exon/intron, unique mapped reads, gene per read, percentage of rRNA reads, variability in number of genes and dropout. Data is summarized using box plot representation around the median of the population.



Applications

The **cellenCHIP 384-3'RNA-Seq Kit** allows library preparation from picogram input amounts of RNA. It can be used in stem cell, immuno-oncology or cancer facilities to:

- Profile tumor cells & tumor infiltrating immune cells
- Study CTCs or other liquid biopsy material
- Analyze cancer stem cell heterogeneity
- Identify tumor cell clones' resistance to therapies
- Investigate complex signaling pathways



Gene expression



Personalized therapy



Biomarker identification



Cell type identification

cellenONE®



The **cellenONE®** is a unique platform combining high accuracy single cell isolation and nanoliter reagent dispensing. Image-based cell isolation ensures only single cells of interest are isolated while gentle piezoacoustic droplet generation preserves cell viability and gene expression. The same instrument also performs precision nanoliter dispensing of reagents (both aqueous and organic) allowing miniaturisation of a range of single cell omics workflows.

For more information, visit: www.cellenion.com/products/cellenone/

Related Products

Catalogue Number

cellenCHIP 384-3'RNA-Seq Kit

CTR-5016- 1-4; 2-8; 9-12; 13-16

cellenCHIP 384 Accessory Kit

CAK-5015



cellenCHIP 384 Accessory Kit

The **cellenCHIP 384 Accessory Kit** is required to perform parts of the cellenCHIP 384-3'RNA-Seq Kit protocol, such as dispensing cells into the cellenCHIP 384 RTready using the cellenONE®.

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