

cellenCHIP 384

Miniaturized single cell omics sample preparation



About cellenCHIP 384

The cellenCHIP 384 is an innovative platform enabling miniaturized sample preparation of individual cells for single cell omics applications.

Over the last decade, the development of single cell omics analyses has revolutionized Biology and Medicine by deciphering a number of mechanisms that would not have been accessed by traditional bulk cell analyses.

With its optimal design and associated accessories, the cellenCHIP 384 further extends the capabilities of the cellenONE® technology by facilitating miniaturization of single cell workflows.

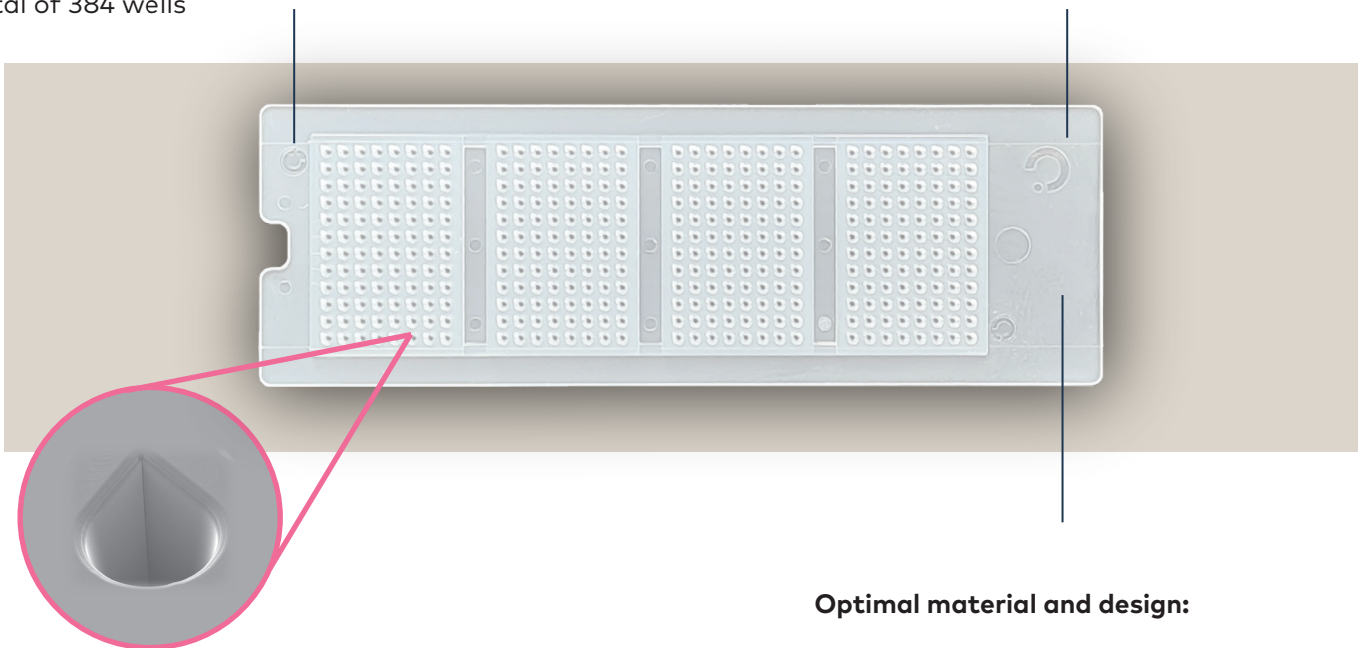


Product Specifications

With its microscope slide footprint, the cellenCHIP 384 allows novel miniaturized single cell omics applications in nanoliter-scale volumes

Each cellenCHIP 384 contains the equivalent of 4 x 96 MTPs, arranged in an 8 x 12 geometry, resulting in a total of 384 wells

Transparent material for high-resolution imaging



V-shaped well structure with flat bottom and proprietary drop-shape spout design, which guides fluid out of the wells and maximizes liquid recovery

Optimal material and design:

- Preventing well-to-well contamination or splashing
- Enabling highly efficient DNA recovery: >95%
- Low autofluorescence

Benefits

Flexible: compatible with most isothermal sample preparations

Gentle: preservation of cell integrity in the chip enables single cell analysis in the cell's natural state

Cost-saving: over 95% volume reduction compared to standard 384-well microplate with no loss of sensitivity

Unique: Low autofluorescence and transparency allows high-resolution imaging for the visualization of cells

Universal: a wide range of cell and particle sizes can be used for a variety of applications



Applications

The cellenCHIP 384 enables multiple isothermal single cell omics applications as well as miniaturized nanovolume reactions.

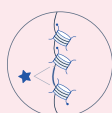
Single cell omics



scRNA-Seq



scWGS



scATAC-Seq

Nanovolume reactions



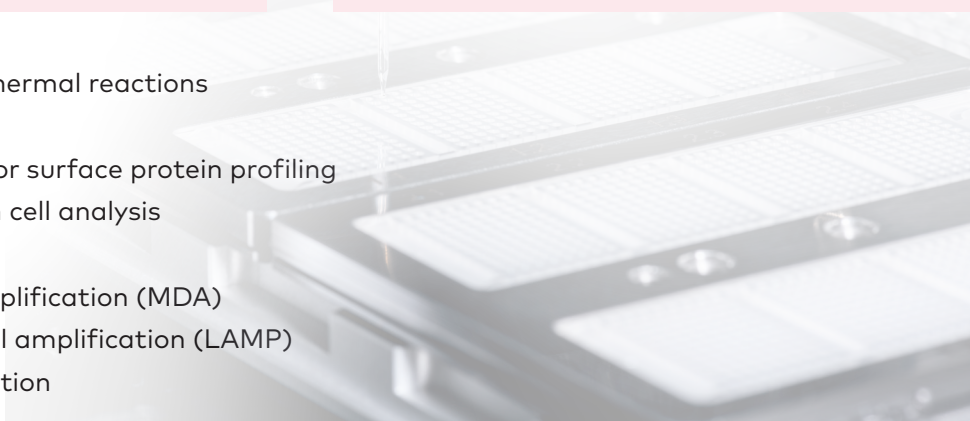
Microscopy Applications



Sample Preparation

Example of workflows & isothermal reactions

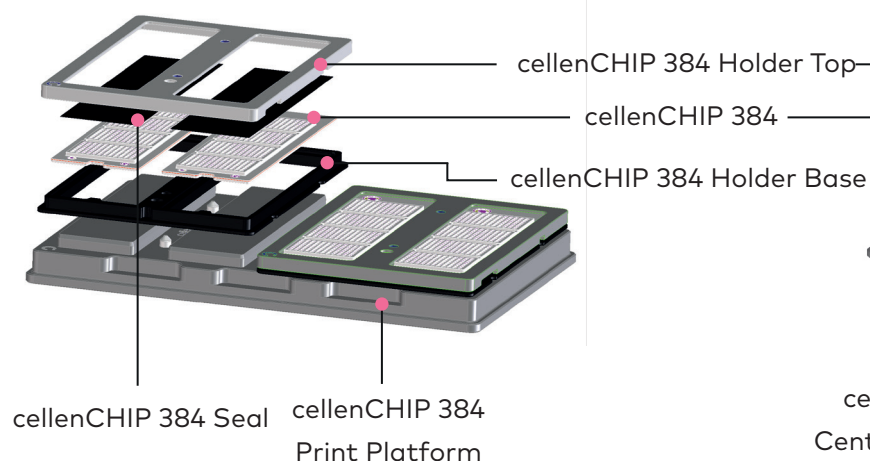
- 3'scRNA-Seq
- CITE-Seq or TOTAL-Seq for surface protein profiling
- Bacterial and mammalian cell analysis
- Reverse transcription
- Multiple displacement amplification (MDA)
- Loop mediated isothermal amplification (LAMP)
- Tagmentation/fragmentation



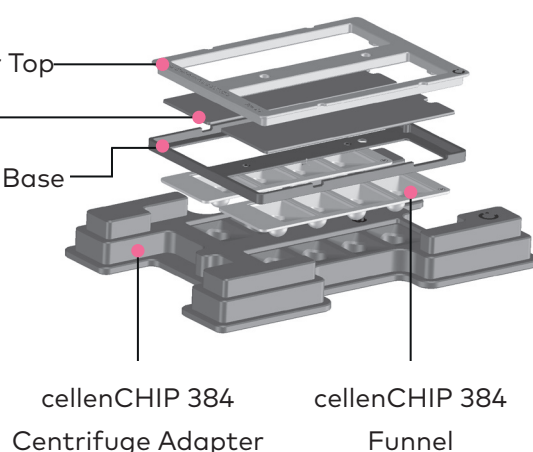
About cellenCHIP 384 Accessory Kit

The cellenCHIP 384 Accessory Kit contains all necessary hardware parts for dispensing of cells and reagents into the cellenCHIP 384 using the cellenONE® platform as well as adaptor for recovery and pooling of reagents using centrifugation

Set parts for use on cellenONE®



Set parts for use on centrifuges



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: <https://www.cellenion.com/products/cellenone/>

Related Products

cellenCHIP 384 Set

cellenCHIP Accessory Kit

Catalogue Number

CES-5016-4

CAK-5015

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