

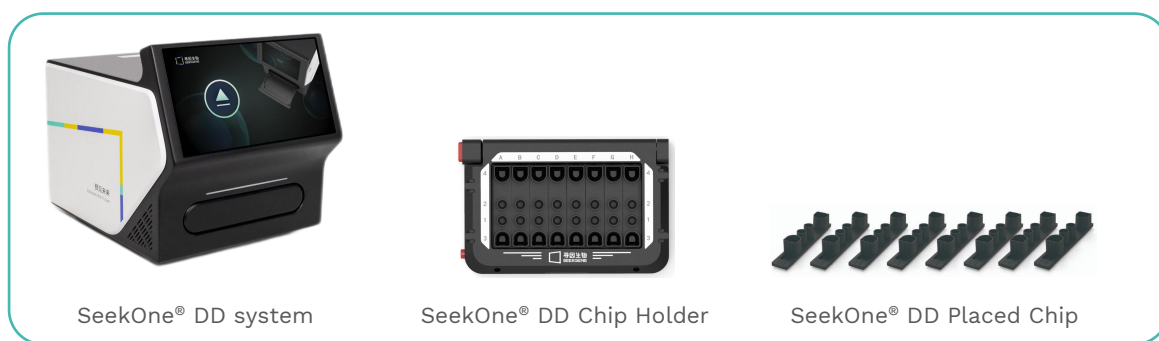
SeekOne® Digital Droplet System

1. Overview of SeekOne® Digital Droplet System

SeekOne® Digital Droplet System (SeekOne® DD System), self-developed by Beijing SeekGene® Biotechnology Co., Ltd., can be applied to various medical studies, including cancer, immunity, cell development, viral infection, drug discovery, and target screening.

Based on microfluidic technology, the system achieves single-cell partitioning and capture with water-in-oil

droplets. Barcoded beads are designed for the molecular labelling of different cells and their mRNAs. After labelling single cells for gene expression, high-throughput single-cell libraries can be constructed. Finally, SeekSoul® Tools, our efficient single-cell analysis software, can be used to process and analyze single-cell data.



2. Highlights for SeekOne® DD

- SeekOne® Digital Droplet System is an **automated instrument** for single cell partitioning, capture, and labelling based on the principle of microfluidics.
- The DD system is **tailored for highly viable cells**, such as brain tissue, retinal tissue, and all tissues from aged individuals.
- The DD system is **compatible with various single cell products** that facilitate a range of single cell experiments, including single nuclei RNA-sequencing, single-cell 3' transcriptome-seq, single-cell 5' transcriptome-seq, single-cell full-length RNA sequence transcriptome-seq, and single cell immune profiling with many more on the way.
- **High sample throughput of up to 8 samples in parallel** is suitable for large cohort or atlas studies where multiple samples need to be processed simultaneously.
- **Equipped with a temperature control system** that ensures more stable reactions, especially for laboratories with a high temperature variance from room temperature.

3. Product Features

Fast: Rapidly generates 150,000 water-in-oil droplets in 3 minutes, reducing cell loss.

Efficient: Up to 12,000 cells can be captured in a single channel with high cell capture rates of up to 65%. Flexible running of 1~8 samples in parallel. No need to manually add glycerol to empty wells.

Accurate: Low doublet rates of less than 0.3% per 1,000 cells; equipped with a temperature control system to eliminate the effects of environmental temperature differences.

Compatible: Highly compatible system with a real-time remote upgrade can be used with comprehensive SeekOne® product lines to meet a variety of scientific research needs.

User-friendly: Small instrument with large screen; 7" + 45° view touch interface makes "one-click" operation more convenient and comfortable.

Cost-saving: Vacant channels can be occupied by Place Chip without wasting chips.

4. Working Principle of SeekOne® DD System

SeekOne® DD system performs single-cell partition, capture, and labelling using microfluidic digital droplets and barcoded beads.

Microfluidic digital droplet: ✂-shaped channel

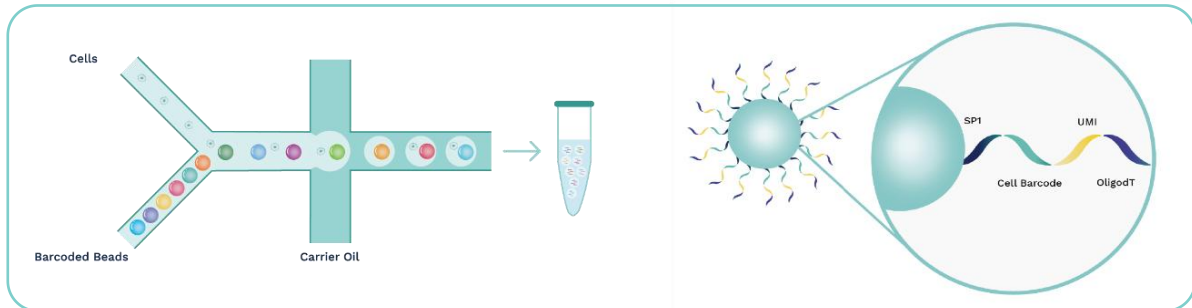


Figure 1. Core technology of SeekOne® DD System. Cells and barcoded beads are added separately and then react in the carrier oil to form emulsion droplets in the ✂-shaped channel. After that, mRNA molecules released by the cells are captured by oligo(dT) on the barcoded beads.

5. SeekOne® DD System for Single Cell Solution

SeekOne® DD system offers a one-stop-shop single-cell solution from single-cell partition, capture, labelling, and library construction to data analysis.

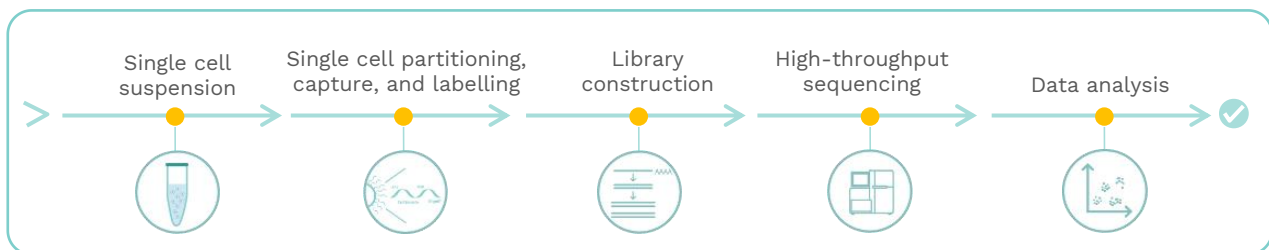


Figure 2. SeekOne® DD System Workflow. The process begins with the collection of single cell suspension. After single cell partitioning, capture and labelling, a single cell library compatible with Illumina and MGI sequencers is constructed for high-throughput sequencing. Data can be processed using SeekSoul® Tools —the efficient data analysis software to explore cell heterogeneity.

6. Product Specifications

- Rapid generation of **150,000** water-in-oil droplets in **3** minutes
- Efficiently capture **500-12,000** cells per channel
- Flexible running of **1~8** samples in parallel
- Cell size flexibility: cell diameter of **5~40** μm
- High cell capture rates of up to **65%**
- Low doublet rates of under **0.3%** per **1,000** cells

Instrument

Instrument	Product code
SeekOne® Digital Droplet System	M001A

Compatible Kits

SeekOne® DD Single Cell Full-length RNA Sequence Transcriptome-seq (scFAST-seq) Kit

Product	Product code
SeekOne® DD Single Cell Full-length RNA Sequence Transcriptome-seq (scFAST-seq), 2 tests/8 tests	K00801-02/K00801-08
Product Components	Component code
SeekOne® DD Chip S3 Kit, 2 tests/8 tests	K00202-0201/K00202-0801
SeekOne® DD scFAST-seq Barcoded Beads Kit, 2 tests/8 tests	K00801-0202/K00801-0802
SeekOne® DD scFAST-seq Reverse Transcription Kit, 2 tests/8 tests	K00801-0203/K00801-0803
SeekOne® DD Library Construction Kit, 2 tests/8 tests	K00202-0204/K00202-0804
SeekOne® DD scFAST-seq Cleanup Kit, 2 tests/8 tests	K00202-0205/K00202-0805

SeekOne® DD Single Cell 3' Transcriptome-seq Kit

Product	Product code
SeekOne® DD Single Cell 3' Transcriptome-seq Kit, 2 tests/8 tests	K00202-02/K00202-08
Product Components	Component code
SeekOne® DD Chip S3 Kit, 2 tests/8 tests	K00202-0201/K00202-0801
SeekOne® DD Single Cell 3' Barcoded Beads Kit, 2 tests/8 tests	K00202-0202/K00202-0802
SeekOne® DD Single Cell 3' Reverse Transcription Kit, 2 tests/8 tests	K00202-0203/K00202-0803
SeekOne® DD Library Construction Kit, 2 tests/8 tests	K00202-0204/K00202-0804
SeekOne® DD Single Cell Cleanup Kit, 2 tests/8 tests	K00202-0205/K00202-0805

SeekOne® DD Single Cell 5' Transcriptome-seq Kit

Product	Product code
SeekOne® DD Single Cell 5' Transcriptome-seq Kit, 2 tests/8 tests	K00501-02/K00501-08
Product Components	Component code
SeekOne® DD Chip S3 Kit, 2 tests/8 tests	K00202-0201/K00202-0801
SeekOne® DD Single Cell 5' Barcoded Beads Kit, 2 tests/8 tests	K00501-0202/K00501-0802
SeekOne® DD Single Cell 5' Reverse Transcription Kit, 2 tests/8 tests	K00501-0203/K00501-0803
SeekOne® DD Library Construction Kit, 2 tests/8 tests	K00202-0204/K00202-0804
SeekOne® DD Single Cell Cleanup Kit, 2 tests/8 tests	K00202-0205/K00202-0805

SeekOne® DD TCR amplification Kit (Human)

Product	Product code
SeekOne® DD Single Cell TCR Enrichment Kit (Human), 2 tests/8 tests	K00601-02/K00601-08

Product Components	Component code
SeekOne® DD Single Cell TCR Amplification Kit (Human) , 2 tests/8 tests	K00601-0201/K00601-0801
SeekOne® DD Library Construction Kit, 2 tests/8 tests	K00202-0204/K00202-0804

SeekOne® DD TCR amplification Kit (Mouse)

Product	Product code
SeekOne® DD Single Cell TCR Enrichment Kit (Mouse), 2 tests/8 tests	K01101-02/K01101-08
Product Components	Component code
SeekOne® DD Single Cell TCR Amplification Kit (Mouse) , 2 tests/8 tests	K01101-0201/K01101-0201
SeekOne® DD Library Construction Kit, 2 tests/8 tests	K00202-0204/K00202-0804

SeekOne® DD BCR amplification Kit (Human)

Product	Product code
SeekOne® DD Single Cell BCR Enrichment Kit (Human), 2 tests/8 tests	K00701-02/K00701-08
Product Components	Component code
SeekOne® DD Single Cell BCR Amplification Kit (Human) , 2 tests/8 tests	K00701-0201/K00701-0801
SeekOne® DD Library Construction Kit, 2 tests/8 tests	K00202-0204/K00202-0804

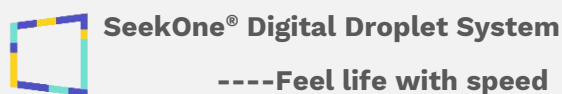
SeekOne® DD BCR amplification Kit (Mouse)

Product	Product code
SeekOne® DD Single Cell BCR Enrichment Kit (Mouse), 2 tests/8 tests	K01201-02/K01201-08
Product Components	Component code
SeekOne® DD Single Cell BCR Amplification Kit (Mouse) , 2 tests/8 tests	K01201-0201/K01201-0801
SeekOne® DD Library Construction Kit, 2 tests/8 tests	K00202-0204/K00202-0804

Compatible Software

Compatible Software
SeekSoul®Tools single-cell data analysis software

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