SEEKGENE

SeekOne® DD Series Products

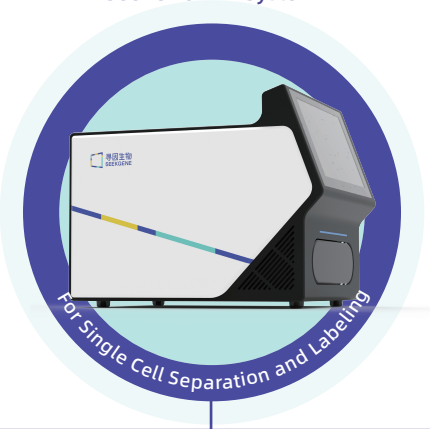
Your All-In-One
Single Cell Solutions

Decoding Unknown of Life with
Novel Single-cell Technology

Mail: info@seekgene.com

SeekOne® DD System - A Reliable Single Cell Platform

SeekOne® DD System



3' scRNA-seq
(Single Cell 3' RNA Transcriptome)

Immune Profiling
(5' scRNA-seq + V(D)J-seq)

scFAST-seq
(Single Cell Full-length RNA Sequence Transcriptome)

SeekOne® DD Kits For Single Cell Library Construction

Efficient System

Total running time of just **4.5** minutes for up to **8** samples in parallel

Stable Platform

The system has been validated by **20+** species, **500+** tissue types, and **10,000+** samples, giving high repeatable results.

Broad Applications

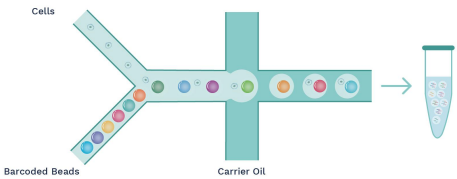
Various reagent kits for different research purposes, including tumor, immunology, development, virus, and lncRNA, etc.

One-stop-shop Solution

From cell partition and labeling to bioinformatic analysis, we provide a one-stop-shop single cell solution.

SeekOne® Digital Droplet Instrument

SeekOne® Digital Droplet (SeekOne® DD) System is an automated instrument for single cell partitioning, capture, and labeling based on the principle of microfluidics. In addition to general sample types, the DD system is particularly suitable for highly fragile cells, such as brain tissue, retinal tissue, and all tissues from aged individuals.



Specifications

- **Size:** 23.0×21.5×26.0 (cm)
- **Weight:** 6.6 Kg
- Cell size diameter of **5~40 μm**
- High cell capture rates up to **65%**
- Low doublet rates of as low as **0.3%** for 1,000 cells
- Efficiently capture **500-12,000** cells per channel
- Up to **96,000** cells per run

Features

Efficient
Rapid generation of 150,000 droplets in 3 minutes

Stable
Equipped with temperature control system

Flexible
1-8 samples can be run in parallel

Cost-saving
Reusable Chip-P for empty channel, no chip waste

All-in-one
Compatible with all SeekOne® DD reagent kits

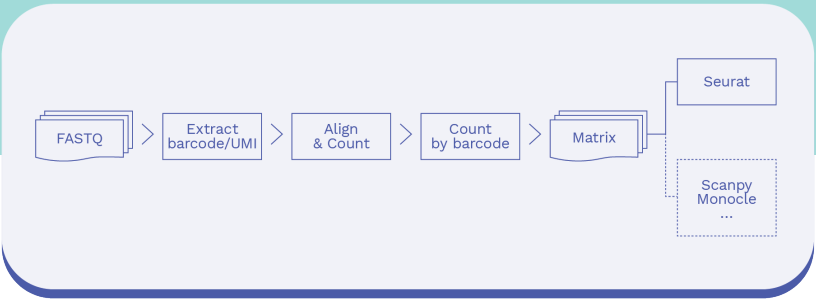
User-friendly
One-touch UI, less operation

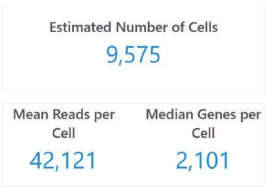
SeekOne® DD Reagent Kits

SeekOne® DD Kits	**3' scRNA-seq** (Single Cell 3' RNA Transcriptome)	**Immune Profiling** (5' scRNA-seq + V(D)J-seq)	**scFAST-seq** (Single Cell Full-length RNA Sequence Transcriptome)
RNA detected	RNA with polyA tails	RNA with polyA tails	All mRNA, lncRNA, viral RNA regardless of polyA tail
RNA capture principle	Oligo dT	TSO	Semi-random primer
Sequencing results	3' ends of mRNA	5' ends of mRNA; V(D)J sequences	Coverage of full-length RNA sequences
Sequencing platform	Illumina/MGI/ GeneMind	Illumina/GeneMind	Illumina/GeneMind
Read Length	Read1: 29 bp N7 Index: 8 bp N5 Index: 8 bp Read2: 90 bp	5' scRNA-seq Read1: 29 bp N7 Index:8 bp N5 Index:8 bp Read2: 90 bp V(D)J-seq Read1: 29 bp N7 Index:8 bp N5 Index:8 bp Read2: 150 bp	Read1: 150 bp N7 Index: 8 bp N5 Index: 8 bp Read2: 150 bp
Acceptable sample type	Fresh sample; Frozen sample	Fresh sample	Fresh sample; Frozen sample
Analysis dimension	Gene expression	Gene expression TCR/BCR profiling	Gene expression SNP/InDel mutation Gene fusion Lnc & circle RNA regulation Pathogen transcripts such as viral RNA Alternative splicing
Research purpose	Single cell gene expression and cell type identification	Immune receptor mapping, antigen specificity, immune cell diversity along with gene expression from a single cell	More comprehensive and deeper understanding of RNA mechanisms, regulation, and pathways

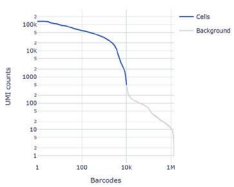
SeekSoul® Tools - For Bioinformatic Analysis

SeekSoul® Tools is a specialized software designed for the processing and analysis of single-cell transcriptome data. It is used to identify cell barcodes, genome alignment, and gene quantification. With this information, the software can generate a comprehensive cell expression matrix for subsequent analyses such as cell clustering and expression analysis. The tool works not only with SeekOne Kits' output data but also supports custom designs using barcode descriptions.

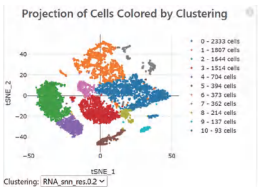




Cell QC



Remove background cells



Cell clustering

Accurate
Annotate cell using high UMI threshold + EmptyDrops method

Consistent
More than 99% consistency with Cell Ranger, more than 30% speed improvement

Open-source
Open-source software, data compatible with SeekGene's proprietary platform and other platforms such as 10x

Data Performance

3′ scRNA-seq (Single Cell 3′ RNA Transcriptome-seq)

Species	Sample type	Estimated Number of Cells	Median Genes per Cell	Valid Barcodes	Sequencing Saturation	Reads Mapped Confidently to Transcriptome	Fraction Reads in Cells	Total Genes Detected
Homo	Glioma	12730	3839	94%	48%	92%	95%	29777
	PBMC	10685	3439	94%	35%	91%	88%	24118
Mouse	Retina	8783	3189	88%	71%	83%	91%	22628
	Brain	9354	2413	90%	58%	88%	93%	21779

Immune Profiling (5′ scRNA-seq + V(D)J-seq)

Species	Tissue Type	Estimated Number of Cells	Median Genes per Cell	Valid Barcodes	Sequencing Saturation	Reads Mapped Confidently to Transcriptome	Fraction Reads in Cells	Total Genes Detected
Homo	PBMC	12717	2464	94.44%	70.37%	82.51%	87.38%	28256
	Lymph nodes	7958	1895	89.26%	82.26%	65.40%	84.13%	25514
	Nasal polyps	7773	1371	90.64%	84.79%	63.30%	87.18%	26778

Species	Tissue Type	Estimated Number of Cells	Mean Read Pairs per Cell	Number of Cells With Productive V-J Spanning Pair	Reads Mapped to Any V(D)J Gene	Reads Mapped to TRA	Reads Mapped to TRB	Cells With Productive V-J Spanning Pair
Homo	PBMC	5191	10447	3849	94.20%	43.80%	50.20%	74.15%
	Lymph nodes	2485	14466	1587	93.30%	40.90%	52.20%	70.30%
	Nasal polyps	3666	10794	2743	90.80%	26.60%	64.10%	74.80%

scFAST-seq (Single Cell Full-length RNA Sequence Transcriptome-seq)

Species	Sample type	Estimated Number of Cells	Mean Reads /Cell	Median Genes per Cell	Valid Barcodes	Sequencing Saturation	Reads Mapped Confidently to Genome	Fraction Reads in Cells	Total Genes Detected	rRNA%	mtRNA%	lncRNA%
Homo	Brain	7,213	49,672	3448	92.68%	66.39%	86.74%	91.99%	25,279	1.63%	0.36%	6.40%
	Gallbladder Tumor	6,656	60,309	2004	90.89%	81.68%	80.57%	88.66%	25,252	3.29%	0.55%	6.33%
	Liver Tumor	4,347	104,311	1912	91.38%	89.17%	79.37%	87.84%	24,386	3.34%	0.17%	7.11%
	lymphoma	7,754	46,080	1889	92.26%	77.12%	83.98%	91.11%	24,646	2.02%	0.22%	6.08%

Order SeekOne® DD Products

Product	Product code
SeekOne® Digital Droplet System	M001A

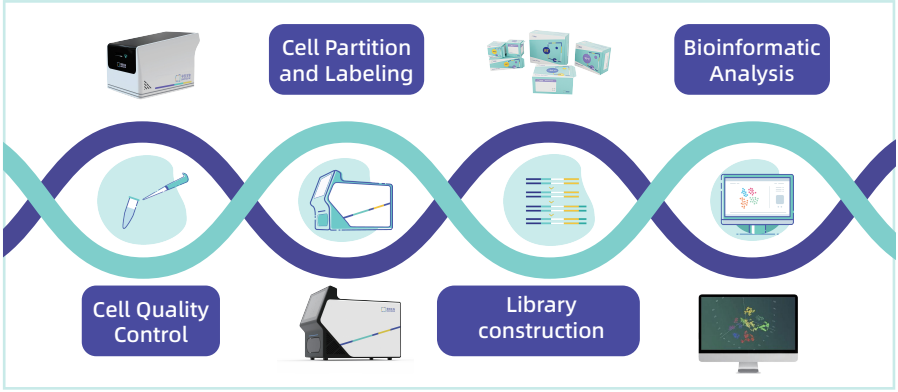
Product	Product code
SeekOne® DD Single Cell Full-length RNA Sequence Transcriptome-seq Kit (scFAST-seq), 8 tests	K00801-08
SeekOne® DD Single Cell 3' Transcriptome-seq Kit, 8 tests	K00202-08
SeekOne® DD Single Cell 5' Transcriptome-seq Kit, 8 tests	K00501-08
SeekOne® DD Single Cell TCR Enrichment Kit (Human), 8 tests	K00601-08
SeekOne® DD Single Cell TCR Enrichment Kit (Mouse), 8 tests	K01101-08
SeekOne® DD Single Cell BCR Enrichment Kit (Human), 8 tests	K00701-08
SeekOne® DD Single Cell BCR Enrichment Kit (Mouse), 8 tests	K01201-08

SeekGene BioSciences is an innovative enterprise that specializes in the independent development of single-cell technology. SeekGene offers high-quality single-cell products and laboratory construction solutions to global scientists, technology companies, pharmaceutical companies, and other customers.

Business Objectives	Leader in Developing Single Cell Technology
Business Concept	Honesty, Reliability, Steadiness, Great Truths Are Always Simple
Company Vision	Warm Life with Technology. Envision the Future

What We Provide?

- Innovative Single-cell Technologies
- Broad Single-cell Product Line
- Full-chain Single-cell Solution
- Affordable and High-quality Products



Follow our social media to stay ahead with latest advances in single-cell field

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