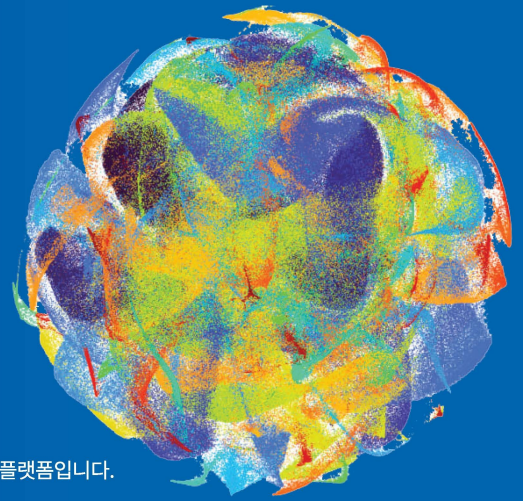# Reveal the full complexity of cellular diversity, **cell by cell**

Chromium

Chromium Single Cell Gene Expression은 단일 세포 단위에서 유전자 발현량 및 변화를 분석하는 플랫폼입니다.

Cellular heterogeneity, rare cell type detection, response to therapeutic interventions, mechanisms of cellular differentiation 등을 세포 단위에서 확인이 가능하며 면역학, 암, 신경계 연구 등에서 활용됩니다.

빠른 분석
4주 이내 결과 생산

Prep 노하우
Organoid 등 다양한
조직 고유 노하우 보유

On-call 서비스
Fresh 검체
당일 Dissociation

컨설팅
실험 디자인 &
심화분석 논의

**연구자 중심의
단일세포 맞춤 분석 서비스**

❯ How does Visium provide Insights in Research

Single Cell Resolution
Bulk RNA Seq 대비 cell-to-cell
differences를 확인하는 정밀한 데이터

넓은 적용 범위
Human, Mouse,
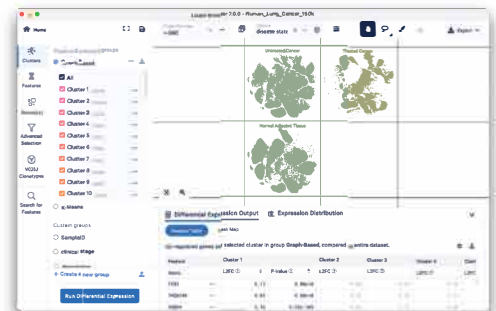Zebrafish, Organoid etc

Multiomic profiling
Immune Mapping

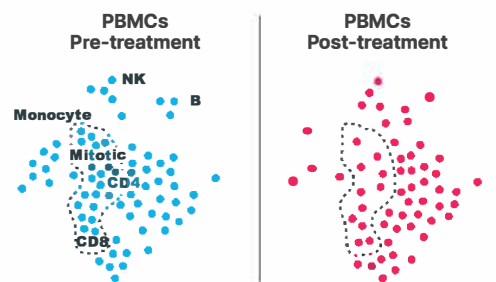**Discovery & Validation**
새로운 바이오마커를 찾거나,
특정 cell의 activation state 등을 확인
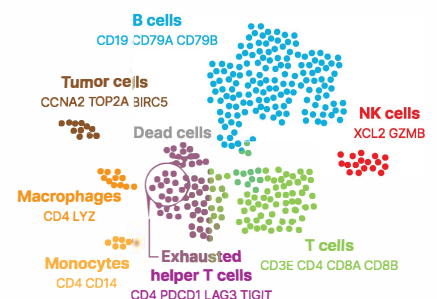
❯ Example Results

Identify Key Differences between Responders and Non-responders

Understand Treatment of Diseases

**PBMCs
Pre-treatment**

NK
B
Monocyte
Mitotic
CD4
CD8

**PBMCs
Post-treatment**

Gene Expression Including Immune cells and Tumor cells

B cells
CD19 CD79A CD79B

Tumor cells
CCNA2 TOP2A BIRC5

NK cells
XCL2 GZMB

Dead cells

Macrophages
CD4 LYZ

Monocytes
CD4 CD14

**Exhausted
helper T cells**
CD4 PDCD1 LAG3 TIGIT

T cells
CD3E CD4 CD8A CD8B

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Workflow

| *On-call Service (Fresh Tissue or Blood) | QC Check | GEM generation | Library Construction | Sequencing | Data Processing | Data Visualization |

Celinus Only Service
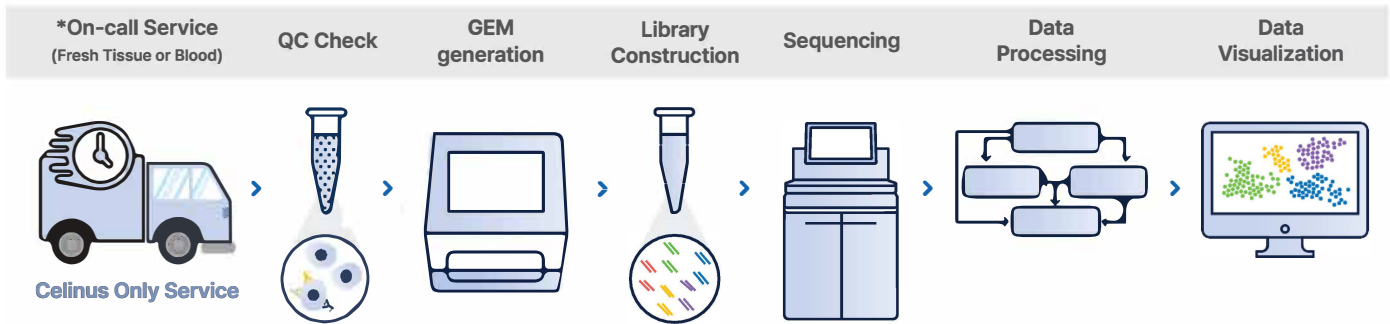
Comparison of Single Cell Platform

	Cell Gene Expression	**Nuclei** Gene Expression	**Immune** Profiling
특징	전반적인 gene expression 확인	Single Cell 분리가 어려운 근육, 신경, biopsy 샘플에 특화	면역세포 발현 확인에 특화
캡쳐 방식	Detect RNA near 3' end of genes	Detect Nuclei's RNA near 3' end of genes	Detect RNA near 5' end of genes and T/B-cell receptors
분석 가능 조직	Human, Mouse, Rat, Non-Human Primate, Organoid, Marine	Human, Mouse, Rat, Non-Human Primate, Organoid, Marine	Human, Mouse, Rat, Non-Human Primate, Organoid
샘플 형태	Cell Suspension Fresh Tissue	Cell Suspension Fresh Tissue Frozen Tissue	Cell Suspension Fresh Tissue
샘플 양	Total Cell count ≥ 10^6 Viability ≥ 80%	Total Nuclei count ≥ 10^5 Volume : 0.2g 이상/vial	Total Cell count ≥ 10^6 Viability ≥ 80%

Data Analysis

Basic

tSNE, UMAP

DEG   **Cluster DEG**

Advanced

DEG

Trajectory

Pathway

Cell Type Annotation

Gene Correlation

Cell to Cell Interaction