

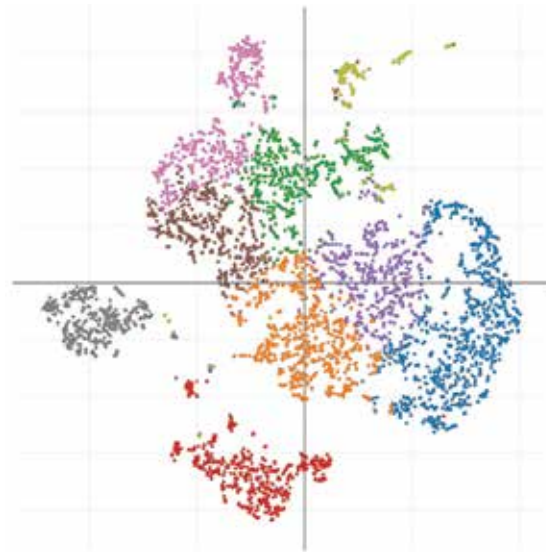


## Single-Cell RNA Sequencing

Accelerating research by exploring cellular heterogeneity, tracking population changes, and uncovering molecular interactions

### Uncovering cellular diversity to advance clinical and translational research

Single-cell sequencing is a next-generation sequencing method enabling in-depth characterization of biomolecules by uncovering genetic expression at single-cell resolution. It has advantages over conventional bulk sequencing in its ability to detect rare cell types, uncover tumor heterogeneity, trace lineages, discover drug-resistant cell populations, and characterize complex cell populations such as immune cells in peripheral blood. Q<sup>2</sup> Solutions utilizes leading technologies such as the 10x Genomics<sup>®</sup> Chromium<sup>™</sup> and Illumina<sup>®</sup> NovaSeq<sup>™</sup> platforms. We can meet your sequencing needs with our extensive services spanning the clinical research continuum combined with our global laboratory network and expert support team.



### High quality, high throughput, high satisfaction



Comprehensive suite of genomic services for smarter trials and simpler contracting



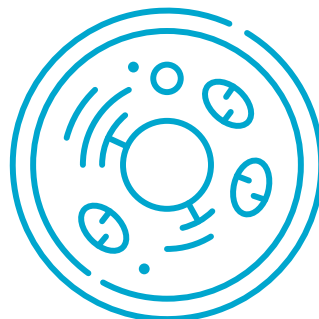
Enhanced high-throughput workflow to advance large-scale projects



Comprehensive trial support enabled by our global network



Simultaneous analysis of the transcriptome and cell surface proteome with Feature Barcode technology



Single-cell Sequencing



Flexible customization to satisfy specific research needs

Turning Hope  
**Into Help**<sup>™</sup>

## Customizable single-cell sequencing solutions to meet your research needs

Single-Cell RNA-Seq	Single-Cell Immune Repertoire – TCR & BCR Profiling	Single-Cell Surface Protein Profiling	Single-Nucleus RNA-Seq
Profile up to 10,000 cells per sample with our single-cell RNA sequencing assay. Our assay provides 3' or 5' digital gene expression using the Chromium Controller™ microfluidic platform. Cryopreserved samples are thawed and prepared into single-cell suspensions before loading into the Chromium Controller™.	Expand on the information gathered from single-cell processing with our immune repertoire assay. Target full-length paired T-cell receptor or B-cell immunoglobulin (Ig) transcripts, including isotypes and T-cell receptor $\alpha/\beta$ .	Incorporate cell surface protein detection and antigen specificity analysis in conjunction with gene expression and immune repertoire profiling with our surface protein profiling assay.	Interrogate difficult to dissociate cell types and uncover complex heterogeneity with our single-nucleus assay. Use fresh frozen tissue to faithfully capture RNA expression by circumventing transcriptional changes induced by traditional dissociation.

### Supporting studies around the world

Our centralized scientific and operational oversight combined with our global laboratory footprint enables comprehensive, large-scale trial support. Expedient delivery from your clinical site to one of our central labs is essential for maintaining the integrity of your samples. We can transport samples from almost anywhere in the world within a 24-48 hour timeframe.



### Simplify your work

#### 1. Request a Quote

Request a quote today to discover how single-cell sequencing with Q<sup>2</sup> Solutions can advance your research.

#### 2. Ship Your Samples

Our global central laboratory network enables testing at a single site.

#### 3. Get Your Results

Obtain in-depth data to understand gene expression, cell surface markers, immune cell repertoire, and much more.

### Technology you can trust

Our assay acquires single-cell resolution by partitioning individual cells into nano-liter gel beads where they undergo reverse transcription and cellular barcoding followed by library preparation and sequencing. Our validated sample handling procedures ensure reliable chain of custody.



**Sample Preparation and Assessment:** We carefully thaw your samples using our automated, temperature-controlled thaws for cryopreserved PBMCs, reducing the risk of operator variability, over thawing, and contamination. We also utilize high-throughput, automated cell counting and laminar flow cell washing protocols to reduce variability and enhance retention and viability.



**Library Construction:** Each cell is partitioned into nanoliter-scale Gel Beads-in-Emulsion (GEMs) and uniquely barcoded, allowing for labeling and profiling of individual cells. Multiple libraries can be constructed from a single sample, generating multiple readouts that can be linked back to the same single-cell.



**Sequencing:** Prepared libraries are sequenced on Illumina® NovaSeq™ to enable high-throughput, rapid, and deep sequencing for each cell.



**Bioinformatics Analysis and Delivery:** Rapid analysis of samples is enabled by robust computational architecture, a mature standard analysis pipeline, and a dedicated team of bioinformaticists. Upon request, an experienced data analytics team is available to consult on your research objectives and enable deep exploration of project data.

### Contact us

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