

Designed with Nanoscale Resolution to address in-depth Spatial Biology Questions

Stereo-seq

STOmics Stereo-seq™ (SpaTial Enhanced REsolution Omics-Sequencing) technology is the only spatial technology on the market that is capable of exploring the whole transcriptome from multiple species at true single-cell resolution through various sizes of centimeter-level capturing chips.

Stereo-seq™ provides a powerful research tool that is capable of integrating gene expression, protein expression, and other multi-omics data for advanced analysis for cell type identification, tissue microenvironment exploration, and cell/organ developmental research.

Technology highlights

- Subcellular resolution allowing visualization on cellular heterogeneities and efficient cell types annotations
- Multiple chip sizes allowing various tissue types and scalable capture areas

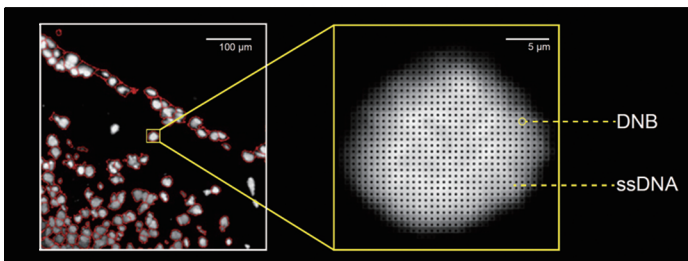


Figure 1. Stereo-seq capturing spots (DNBs) arranged down to single cell resolution, allowing mRNA within one cell to be captured with hundreds of coordinate ID containing DNBs

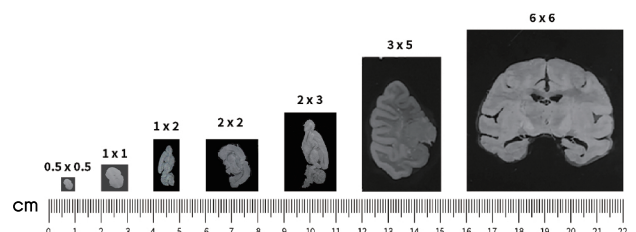


Figure 2. Demonstration of Stereo-seq chip at different sizes

Recent publications using Stereo-seq

- Single-cell Stereo-seq reveals induced progenitor cells involved in axolotl brain regeneration, *Science* 2022
- Spatiotemporal transcriptomic atlas of mouse organogenesis using DNA nanoball-patterned arrays, *Cell* 2022
- A cellular hierarchy in melanoma uncouples growth and metastasis, *Nature* 2022
- Single-cell spatial transcriptome reveals cell-type organization in the macaque cortex, *Cell* 2023
- Spatiotemporal insight into early pregnancy governed by immune-featured stromal cells, *Cell* 2023

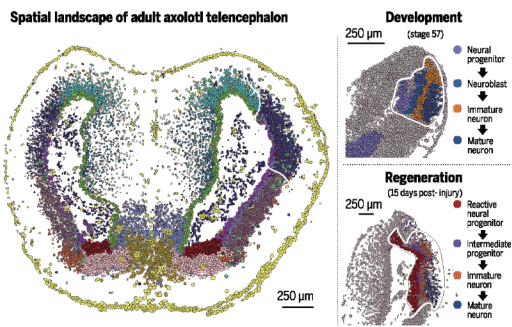


Figure 3. Development and regeneration of axolotl telencephalon. The spatially resolved single-cell transcriptome of the adult axolotl telencephalon as determined by Stereo-seq analyses (left). Upon brain injury in the highlighted lateral pallium region of the left hemisphere, a neural progenitor subpopulation at the wound site was rapidly induced and subsequently replenished lost neurons (bottom right) through a process that partially resembles neurogenesis during development (top right).

Stereo-seq reagent kit solution



STOmics products

Stereo-seq Transcriptomics Solution	Designed with nanoscale resolution to address in depth spatial biology questions.
Stereo-seq Transcriptomics mIF Solution	Co-detection of protein and RNA in a single experiment for extensible applications in tissue and cellular type study.
Stereo-seq Transcriptomics H&E Solution	Providing a more accurate tissue phenotyping and spatial heterogeneity characterization solution for pathological tissues.
Stereo-seq Large Chip Designs	The one and only spatial transcriptomics solution achieves both centimeter level FOV (1cm x 2cm, 2cm x 2cm, 2cm x 3cm) with subcellular resolution for efficient capturing of the whole transcriptome.
Stereo-seq OMNI	Stereo-seq OMNI provides true spatial single-cell total RNA information with accuracy and precision via the innovative 'Free Probe' design.
STOmics Cloud	An online platform for managing and analyzing spatial multi-omics data.