

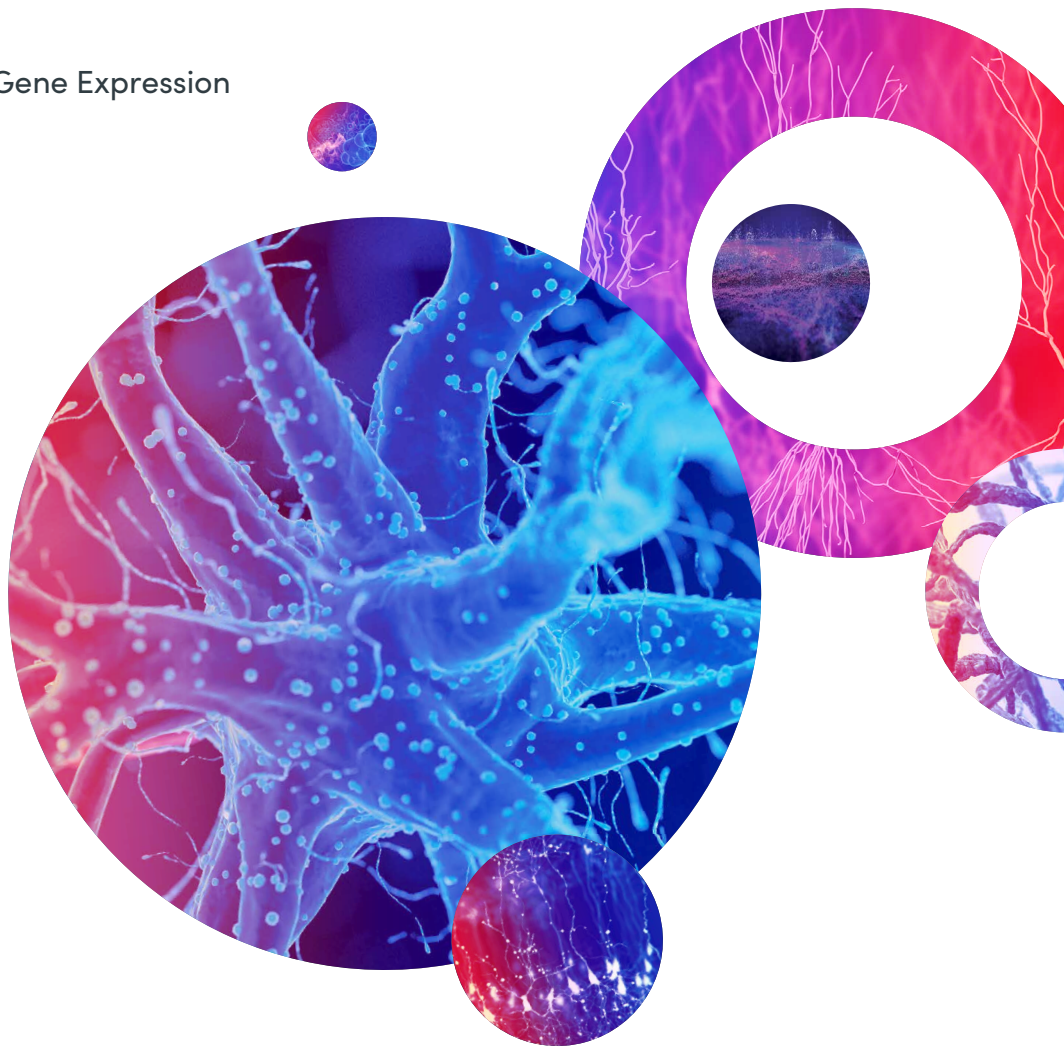
# Explore the complexity of the nervous system

## **Chromium Single Cell Solutions**

- Single Cell Gene Expression
- Single Cell Immune Profiling
- Single Cell Multiome ATAC + Gene Expression
- Single Cell ATAC
- Targeted Gene Expression

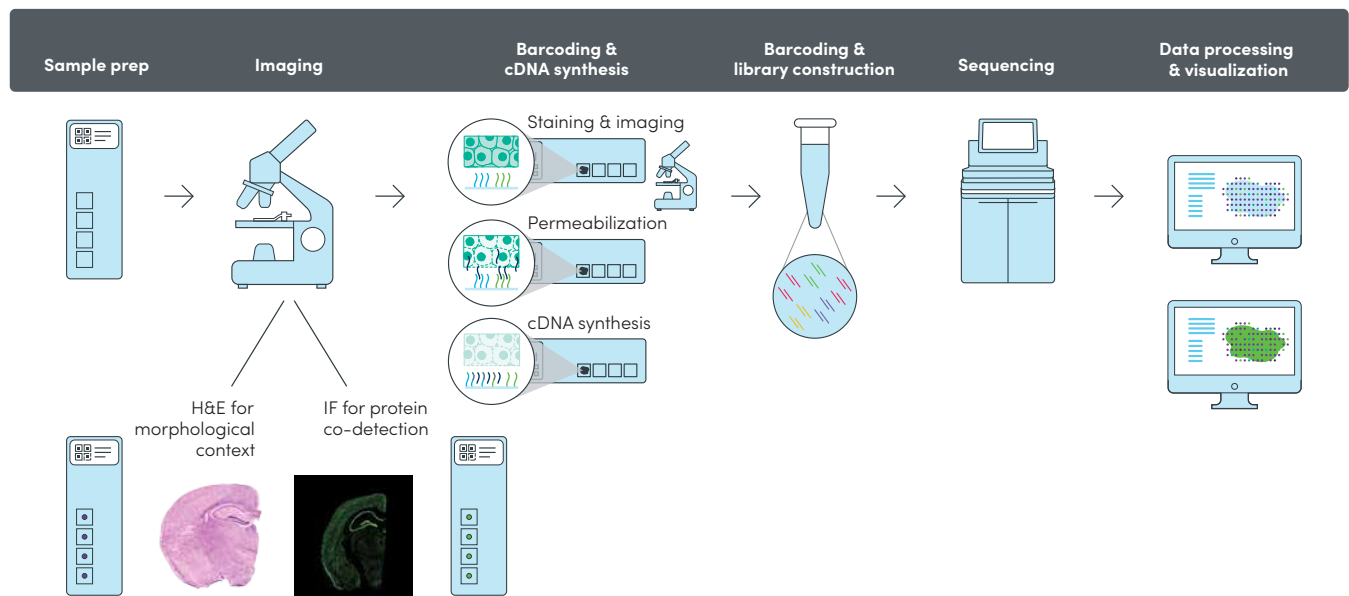
## **Visium Spatial Solutions**

- Spatial Gene Expression
- Spatial Protein Expression
- Targeted Gene Expression

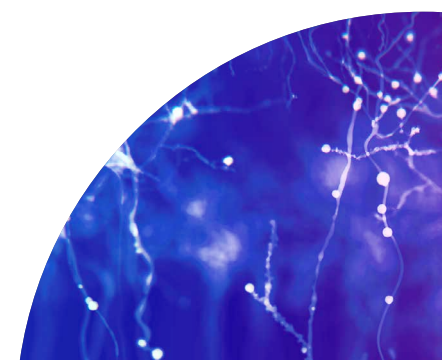
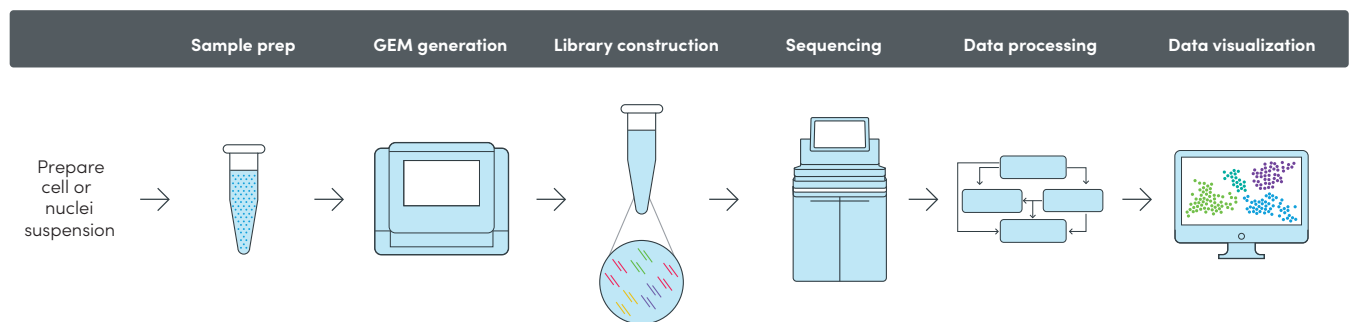


# 10x Genomics empowers neuroscientists to gain a richer understanding of normal brain function and neurological disease states with single cell and spatial multiomics.

## Visium Spatial Gene Expression Workflow



## Chromium Single Cell Workflow



# Neuroscience at True Resolution

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## Uncover Molecular Insights of Neural Cell Function and Disease States

Gain insight into the diverse, complex cellular and signaling networks that control the function of the CNS with unbiased, high-resolution approaches.

Delve deeper into the intricacies of cellular phenotypes and signaling pathways within the CNS with single cell gene expression analysis. Study the epigenetic mechanisms of gene regulation with single cell epigenomics, offering insights into the regulatory landscape of the neural epigenome and transcriptome.

Uncover the cellular contributions of individual cell types, subtypes, and states involved in neurological development and disease by building gene expression profiles alongside cell surface protein expression and CRISPR perturbations with multiomics approaches.

Gain a more comprehensive understanding of spatial and temporal transcriptome changes and protein expression patterns driving pathogenesis with spatial transcriptomics.

Explore adaptive and innate immune cell diversity in neuroinflammation.

- *Chromium Single Cell Gene Expression*
- *Visium Spatial Gene Expression*
- *Chromium Single Cell Multiome ATAC + Gene Expression*
- *Chromium Single Cell ATAC*
- *Chromium Single Cell Immune Profiling*

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## Gain a Deeper Understanding of Neural Cell Identity

Explore neural cell identity and discover a comprehensive, unbiased view of the nervous system at single cell resolution.

Access enhanced cellular phenotyping at the transcriptome level, based on distinct gene expression patterns, with single cell gene expression profiling. Use these molecular signatures to classify individual cells into major cell types in the brain and catalog neural cell populations.

- *Chromium Single Cell Gene Expression*

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## Reveal the Full Complexity of Neural Diversity

Characterize complex populations and reveal rare cell populations, as well as new biomarkers for cellular phenotypes and cell states, with single cell transcriptomics.

Simultaneously decipher gene expression patterns and location with spatial gene expression profiling for analysis of transcriptome profiles in situ.

- *Chromium Single Cell Gene Expression*
- *Visium Spatial Gene Expression*

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## Focus on the Neural Genes That Matter Most to You

Get started quickly using a pre-designed human panel to perform analysis of key neurological genes and pathways specific to your research questions. Customize each panel by adding up to 200 additional genes with our Custom Panel Designer.

- *Targeted Gene Expression*



# Solutions for Neuroscience Research

## Chromium Single Cell Gene Expression

- Profile gene expression in individual cells to identify activated neurons and rare neural cell types and states, without the limits of target pre-selection
- Gain a detailed understanding of cellular function and the molecular mechanisms underlying neurological development and disease

## Chromium Single Cell Immune Profiling

- Simultaneously examine the cellular context of innate and adaptive immunity and immune repertoires of hundreds to tens of thousands of T and B cells in human or mouse on a cell-by-cell basis
- Feature Barcode technology for multiomic applications allows the freedom and flexibility to link gene expression, cell surface proteins, and paired receptor sequences to individual antigens

## Chromium Single Cell Multiome ATAC + Gene Expression

- Simultaneously profile gene expression and chromatin landscape from the same cell, across thousands of cells
- Leverage two modalities at once to more deeply characterize complex cell populations, capture cellular heterogeneity, and discover gene regulatory interactions driving cell differentiation, development, and disease

## Chromium Single Cell ATAC

- Profile the chromatin landscape cell by cell and identify transcription factor binding sites in tens of thousands of cells at single cell resolution
- Discover master regulators, reveal regulatory elements, and characterize gene regulatory networks unique to neural disease and/or neural development phenotypes

## Visium Spatial Gene Expression

- Profile gene expression in anatomically defined regions of the brain by combining histology, immunofluorescence, and mRNA analysis
- Unveil the biological architecture of normal and diseased tissue, and understand the spatial relationship between cell populations, including different subtypes, within important brain structures/regions

## Targeted Gene Expression

- Focus on key neurological pathways of interest using the comprehensive, pre-designed Human Neuroscience Panel with the ability to add up to 200 custom genes, or design a fully custom panel
- Combine the crucial insights enabled by single cell and spatial gene expression analysis with the efficiency and scalability of targeted gene expression

## Contact us

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