

biotechne
spatial™

Power Your Next Breakthrough

**from Target Validation
to Clinical Development**
*with RNAscope™
Professional
Assay Services*

RNAscope™ Professional Assay Services provides flexible, scalable multi-omic services to help you achieve your research goals. Whether you are new to RNAscope technology or are a seasoned assay user, we offer expert end-to-end RNAscope services including early access to new RNAscope assay capabilities.

End-to-End RNAscope ISH Assay Services

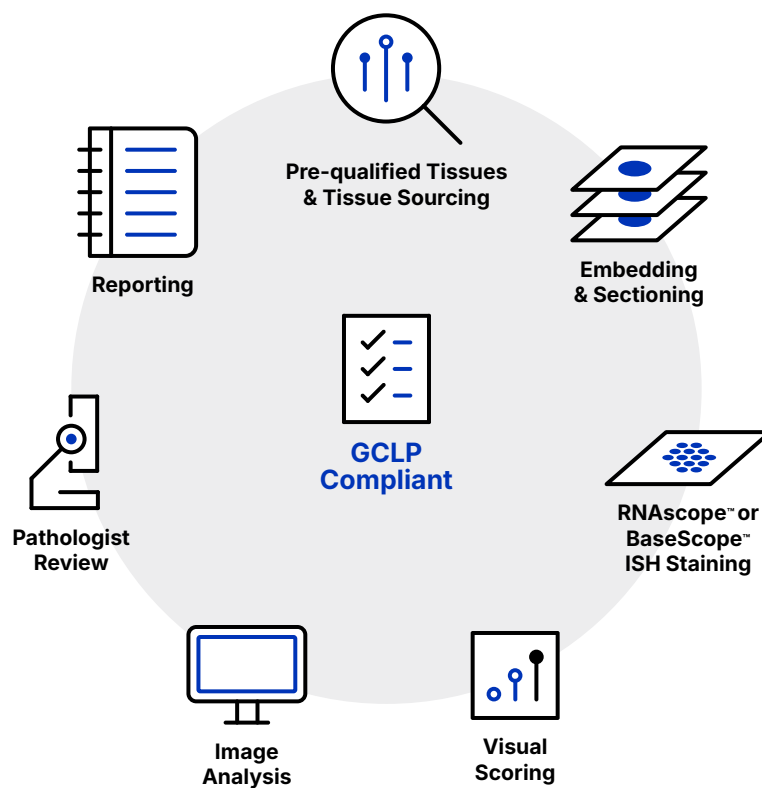


Figure 1. **Comprehensive Assay Capabilities.** End-to End and à la carte services for tissue sectioning, *in situ* hybridization (ISH) staining (chromogenic and fluorescent readouts), high resolution full slide scanning, scoring, and image analysis performed by an experienced team.

Highlights

- **Trusted Partner** - Seamless execution of projects including discovery, preclinical, retrospective clinical, and pilot studies with quality data delivered in a timely manner.
- **Comprehensive** - Complete end-to-end services performed by experienced scientists and analyzed by a pathologist.
- **Convenient** - Access to pre-qualified tissue banks to source desired tissue types from trusted providers.
- **GCLP Compliant** - Standard operating procedures for sample tracking, data management, and data QC.

Multiple Types of Applications

Gene Therapy

- Optimization of viral and non-viral delivery
- Visualize antisense oligos (ASOs), siRNAs, and other target RNAs

- Evaluate biodistribution, gene regulation and function, safety and toxicity in research settings

Cell Therapy

- Visualize tissue distribution of engineered CAR T, TCR T, and iPSC derived cells.
- Quantify transgene expression and cell activation states.
- Characterize localized immune repertoire and cytokine expression.

Oncology/Immuno-oncology

- Characterize tumor biomarkers and checkpoint markers.
- Quantify spatial expression of cytokines and chemokines.
- Oncogenic splice variants.

Target Validation

- Characterize biomarkers identified from discovery programs.
- Evaluate cell and tissue expression profiles.

Robust and Reproducible RNAscope™ Technology

RNAscope is the gold-standard for RNA *in situ* hybridization, delivering industry leading single cell and single molecule resolution. The technology offers unparalleled sensitivity and specificity to visualize the target RNA with morphological context. With RNAscope you can multiplex up to 4 targets and can perform protein co-detection on the same slide.

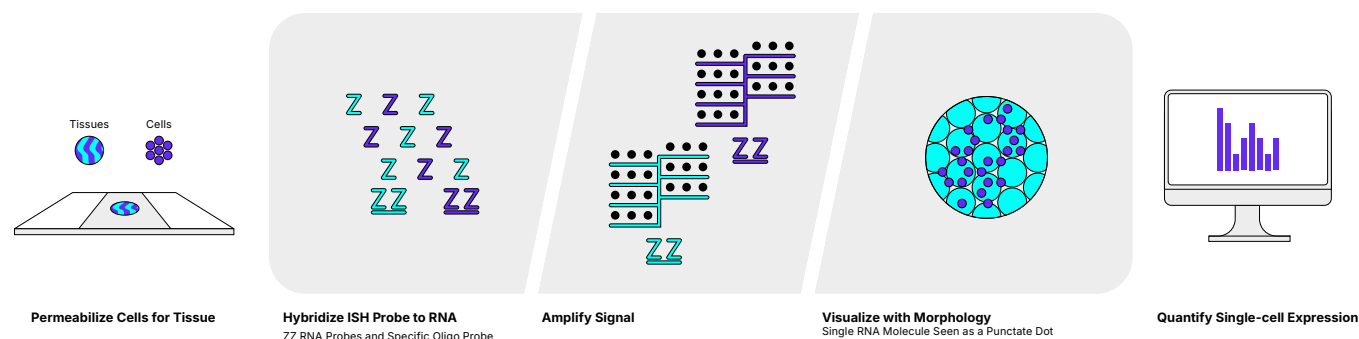


Figure 2. **RNAscope Assay Workflow.** Tissue sections or cells are permeabilized, hybridized with the double ZZ probes in tandem, followed by signal amplification and detection with a chromogenic or fluorescent readout.

Expert Assay Development and Implementation

You will work with expert PhD-level scientists, pathologists, and image analysis specialists to design a project plan to meet your research goals. Experts in RNAscope technology will optimize the assay conditions for different sample types to achieve the best performance. Internal controls provide confidence that maximum sensitivity is obtained.



Figure 3. **RNAscope Professional Assay Services Workflow.** Multiple rounds of optimizations are performed at each step. Quality processes and SOPs ensure reliability and confidence in the results.

Customized Data Analysis

Choose from a comprehensive set of data analysis options to obtain the answers you need.

Semi-Quantitative Visual Scoring

- 0-4 scoring - % expression

Visual H Scoring

- Binned data
- Quantify heterogeneity in marker expression

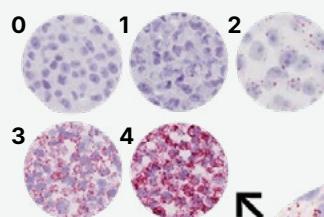
Pathologist Notes

- Pathologist annotations
- Cell type or region of interest scoring

Digital Image Analysis

- Cell-by-cell data; dot count vs area count; H-Score
- HALO™ AI, spatial analysis modules

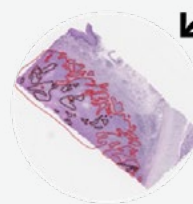
Semi-Quantitative Visual Scoring



Visual H Scoring



Pathologist Notes



Digital Image Analysis

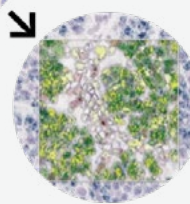


Figure 4. **Comprehensive Data Analysis Offering.** Choose from a comprehensive set of data analysis options to obtain the answers you need.



Contact Us for a Free Project Consultation

Scan the QR code or visit
learn.bio-techne.com/48qhbnB

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