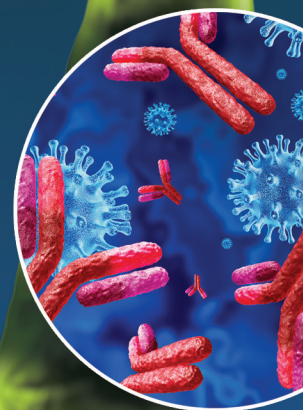
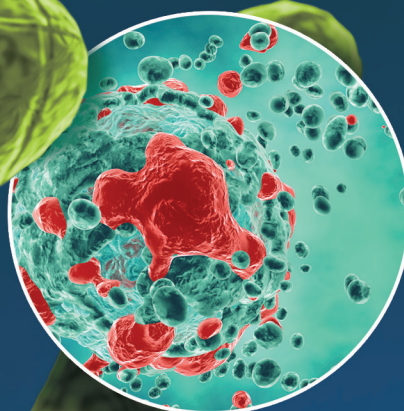
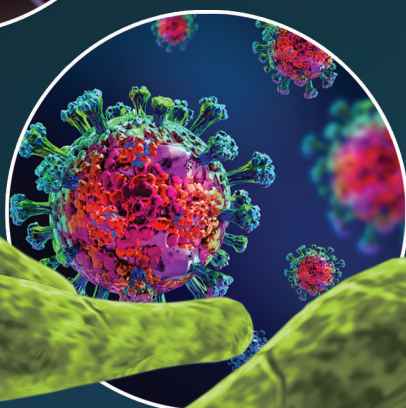
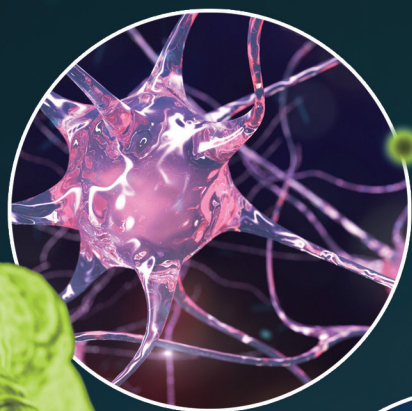


# RNA ISH ASSAY TO DETECT ASO, miRNA, OR siRNA

## THE miRNAscope™ ASSAY

WITH SPATIAL AND MORPHOLOGICAL CONTEXT  
AT SINGLE-CELL RESOLUTION



biotechne®

ACD™

## VISUALIZE SMALL RNAs WITH MORPHOLOGICAL CONTEXT AND SPACIAL RESOLUTION

RNAscope™ technology is an advanced *in situ* hybridization assay that allows for the visualization of single-molecule gene expression directly in intact tissues with single cell resolution. The assay represents a major advancement in RNA ISH approaches with its proprietary probe design to amplify target-specific signals but not background noise from non-specific hybridization.

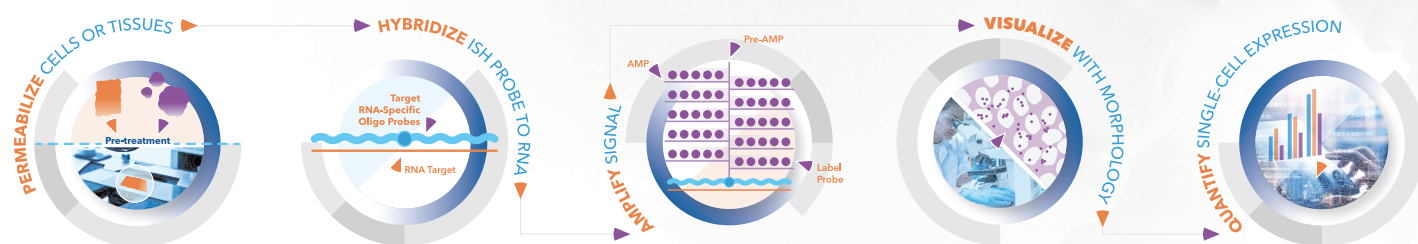
Detection of small RNAs requires a robust, highly specific, and highly sensitive assay with minimal time, ease of effort, and ease of data interpretation. While microarrays and PCR both provide useful molecular profiles of diseases, important clinically relevant cell and tissue context information is lost along with the spatial variation of gene expression patterns. The miRNAscope Assay is an advanced *in situ* hybridization assay leveraging the RNAscope core technology that allows for the visualization of small RNA expression in intact tissues or cultured cells with single-cell resolution.

## THE miRNAscope ASSAY DEMONSTRATES EXCEPTIONAL PERFORMANCE FOR THE DETECTION OF:

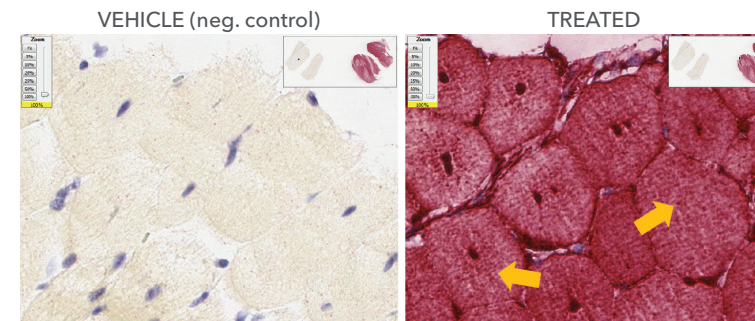
- Antisense oligonucleotides (ASOs)
- microRNAs (miRNAs)
- Small interfering RNAs (siRNAs)
- Small RNA sequences that are 17-50nt in length

## UNLOCK THE POTENTIAL TO DETECT SMALL RNAs WITH THE NEW miRNAscope ASSAY

- Detect and identify cellular subtypes
- Visualize gene regulation with morphological context
- Validate miRNA biomarkers in intact tissues
- Assess small RNA therapeutic delivery mechanism
- Evaluate biodistribution and efficacy of therapy
- Add a visual dimension to heterogeneous tissue biology and analysis

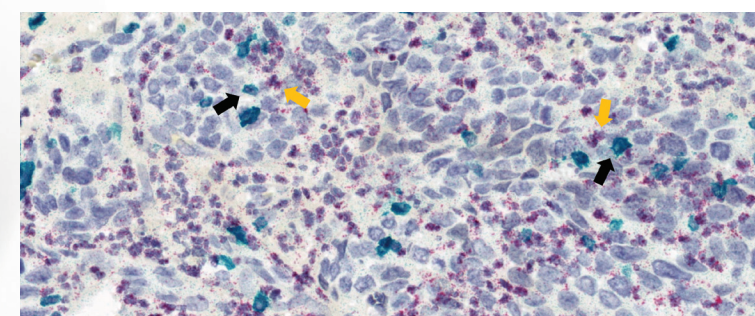


## VISUALIZE AT THE SINGLE-CELL LEVEL WITH UNMATCHED RESOLUTION



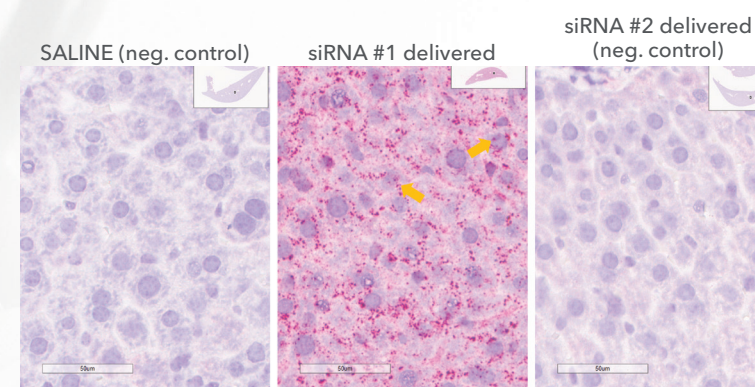
### ASO

Example detection of ASO target (yellow arrows) in the treated mouse quad muscle tissue samples and not in the vehicle samples indicates successful delivery of ASO therapy.



### miRNA ISH-IHC

Example of miRNAscope ISH-IHC staining for miR-223-3p (yellow arrows) / CD3 (black arrows) in human cervical cancer. T cell infiltration with in cervical tumor visualized using CD3-IHC in combination with myeloid-specific miRNAscope miR-223-3p probe.



### siRNA

Example of specific detection of the siRNA#1 probe (yellow arrows) in siRNA#1 treated mouse liver tissue samples only and not in the negative saline nor siRNA#2 treated samples indicates successful delivery of siRNA therapy and specificity of the miRNA-scope Assay. Biodistribution of siRNA target is also observed in the siRNA#1 treated samples.

Note: Above tissue slides were counterstained with hematoxylin to provide blue staining of cells.

## miRNAscope ASSAY BENEFITS

### SPECIFICITY

- Deeper evaluation of target in tissue context
- High signal-to-noise ratio for ease of data interpretation

### SPEED

- Simple and fast workflow with both manual and automated formats to fit your need
- Rapid probe design to target almost any small markers (17-50nt) in any species

### SENSITIVITY

- Spatial context with subcellular resolution
- Compatible with multiple sample types

### EASE OF USE

- An out-of-the-box solution
- Hands on support and guidance from experienced in-house scientists

// We had a great experience using miRNAscope in our compound screening efforts. The technique is incredibly specific and the results are very easy to understand. Also, working with ACD's team has been extremely beneficial. They communicated with us during the process to ensure we can get the answers to our questions. They generated impeccable tissue stainings! //

- A Leading BioPharma Company in NY, USA

# PRODUCT OFFERINGS

## LATEST ADDITION

	Features	Chromogenic Singleplex Red	ISH-IHC Compatibility
miRNAscope™ Assay	Manual Assays	●	●
	Automated on Leica BOND RX System	●	●

## OTHER OFFERINGS

		Chromogenic Singleplex Brown	Chromogenic Singleplex Red	Chromogenic Duplex	Fluorescent Multiplex	HiPlex
RNAscope® Assay	Manual assays	●	●	●	●	●
	Automated on Leica BOND RX System	●	●	●	●	
	Automated on Ventana DISCOVERY ULTRA System	●	●	●		
BaseScope™ Assay	Manual assays		●	●		
	Automated on Leica BOND RX System		●			
	Automated on Ventana DISCOVERY ULTRA System		●			
Pharma Assay Services	Manual assays	●	●	●	●	
	Automated on Leica BOND RX System	●	●	●	●	
	Automated on Ventana DISCOVERY ULTRA System	●	●	●		

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