Molecular Cartography™ enables you to visualize RNA expression patterns while maintaining tissue integrity so you can further interrogate your samples.

- Quantitate results with each dot representing one RNA molecule
- Focus on biology with intuitive bioinformatics tools

Focus on what matters

Download the white paper

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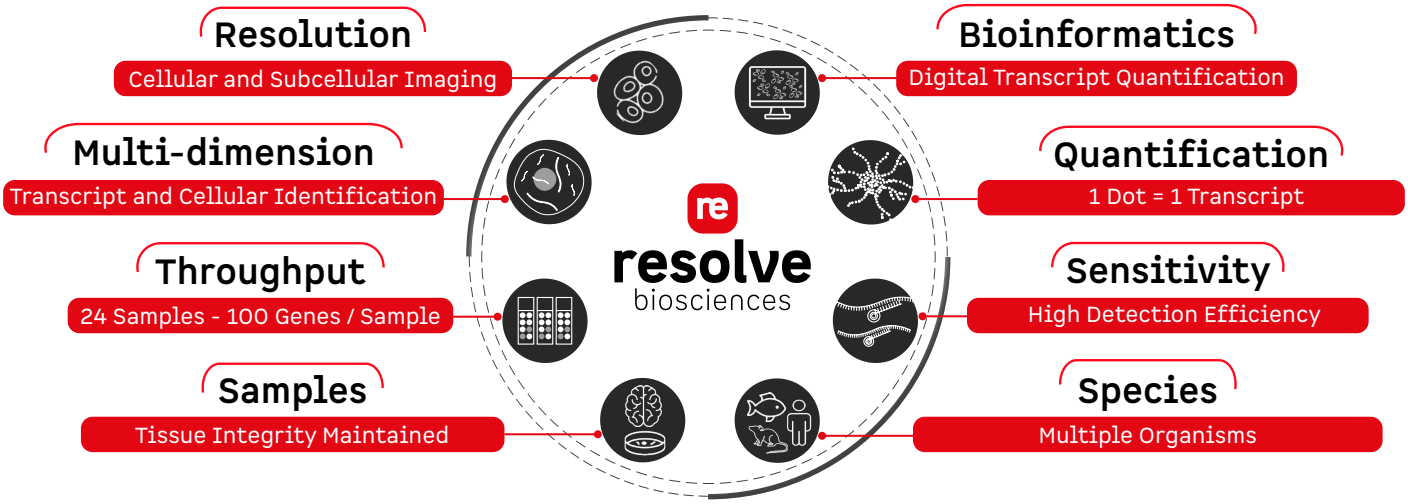

Molecular Cartography is a spatial mRNA analysis platform based on combinatorial single-molecule fluorescent *in situ* hybridization (smFISH). Millions of individual transcripts can be optically identified and spatially localized in three dimensions and in the context of surrounding cells. The transcripts are digitally quantified without requiring sequencing, oligo capture, or enzymatic amplification steps. Combining the advantage of the direct hybridization-and-read strategy, Molecular Cartography provides unbiased and sensitive spatial profiling with robust quantification.

Molecular Cartography reveals previously unseen biological insights:

Sensitivity

Using the power of smFISH, Molecular Cartography offers unprecedented sensitivity with close to 100% detection efficiency, enabling the visualization of millions of individual transcripts per sample.

Resolution

Molecular Cartography offers diffraction-limited, single-molecule detection, with a resolution of 300nm, providing subcellular analysis.

Integrity

The sample remains intact throughout the Molecular Cartography assay, allowing further interrogation using immunohistochemistry or labeling of specific cellular structures using fluorescent dyes.

Transcriptomic reach

Rare transcript detection is a core strength of the technology, with a false-positive rate less than 0.5%. The minimum length necessary to target RNA species with high specificity is 500 nucleotides, suitable for short transcripts, including cytokines.

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