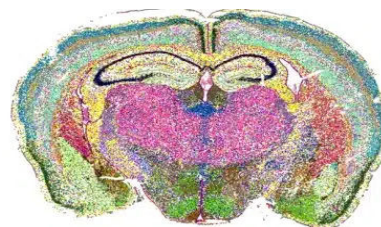


# MERSCOPE V 2.5 Slides Product Sheet

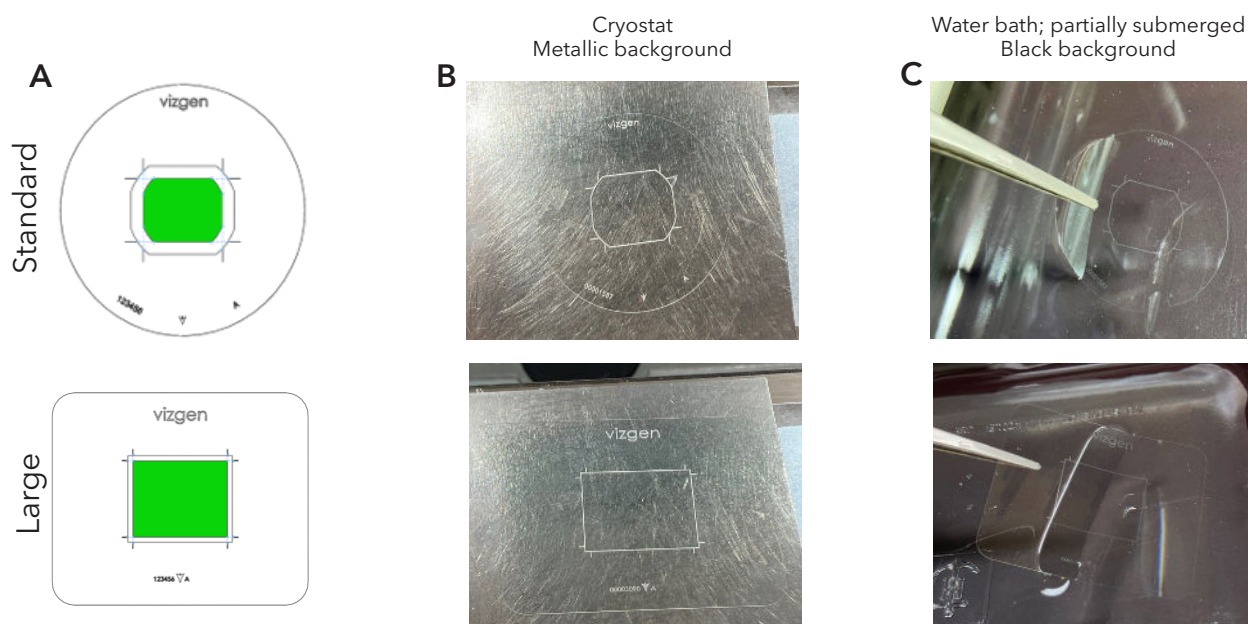


MERSCOPE Slides V 2.5 enhance ease of use without compromising on data quality. Built on the proven MERFISH 2.0™ chemistry, MERSCOPE Slides V 2.5 feature an advanced coating and etched markings that streamline slide handling across every step of the MERFISH workflow while generating data that is directly comparable to Slides V 2.0 with no batch effects. MERSCOPE Slides V 2.5 are fully compatible with MERSCOPE and MERSCOPE Ultra™ Platforms and require no changes to standard protocols.

Product	Quantity	Catalog #
MERSCOPE Standard Slide Box, V 2.5	10 Slides	10500139
MERSCOPE Large Slide Box, V 2.5	5 Slides	10500140

## MERSCOPE Slides V 2.5 deliver:

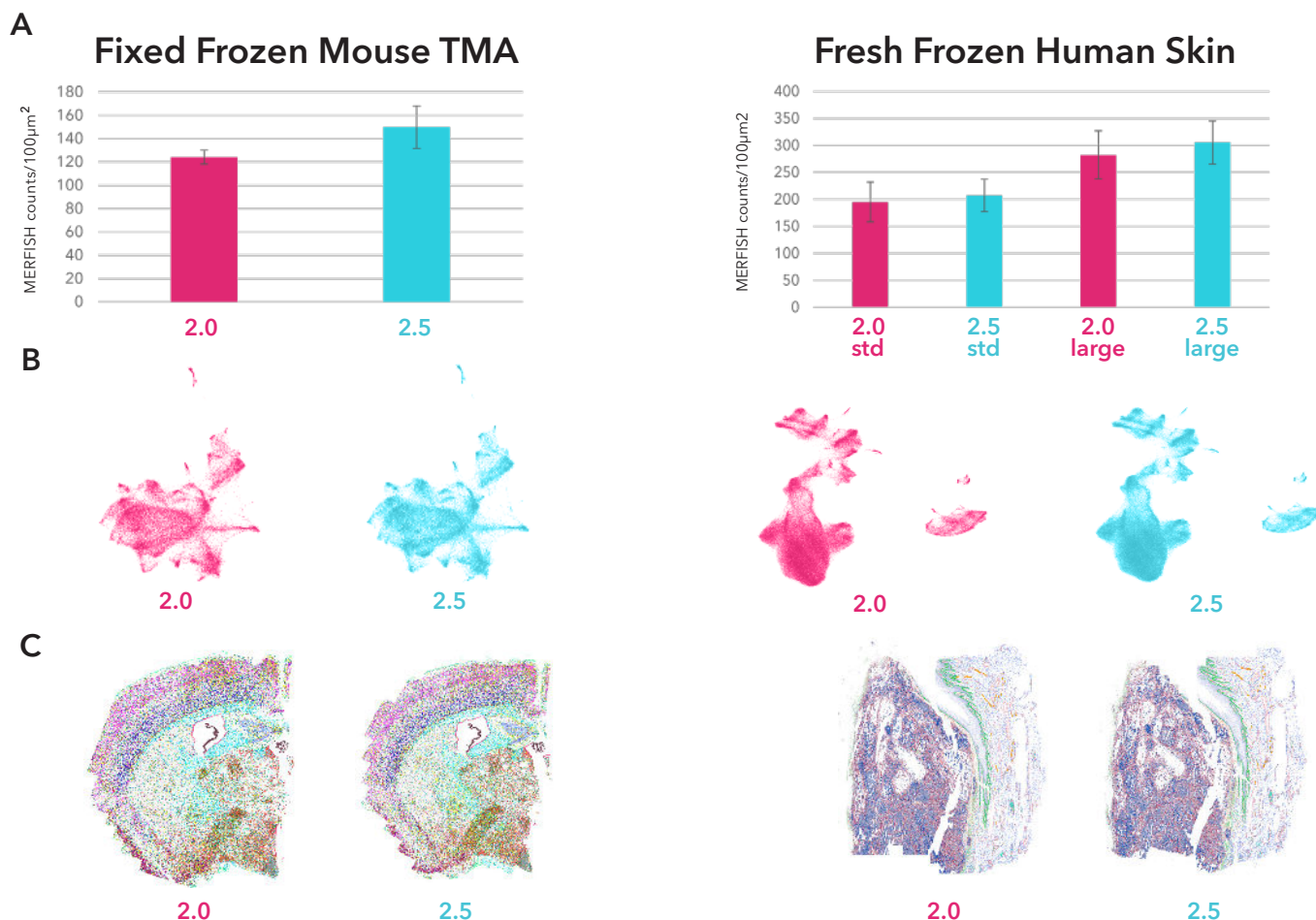
- **High-contrast, etched markings** visible on both light and dark backgrounds (Fig. 1)
- **Improved tissue placement accuracy** with a built-in scale-bar guide to the imageable area
- **Enhanced gel performance & reliable tissue adherence** that maximize usable data output
- **High-quality MERFISH data** across fresh frozen, fixed frozen, and FFPE samples (Fig. 2)



**Figure 1. Etched markings on MERSCOPE Slides V 2.5 are high-contrast across both light and dark backgrounds in both slide formats.** Standard (top row) and Large (bottom row) MERSCOPE Slides V 2.5 shown with (A) schematic of the imageable area (green) and markings. Each slide carries a unique serial number enabling sample tracking from sectioning through imaging. (B) Slide on a cryostat stage against a metallic background; (C) slide partially submerged in a water bath against a black background. Etched markings remain clearly visible throughout sectioning and tissue-mounting steps, supporting confident tissue placement against any background – whether during cryosectioning (B) or FFPE sectioning (C).

## High-quality MERFISH data, preserved across tissue types

MERSCOPE Slides V 2.5 were validated against V 2.0 slides across a range of sample types, including a fixed frozen mouse brain tissue microarray (TMA) and fresh frozen human skin, using the standard MERFISH 2.0 workflow. Across all tissues tested, MERSCOPE Slides V 2.5 delivered transcript counts equal to or higher than V 2.0, with near-complete overlap in UMAP embeddings and matching spatial distribution of Leiden clusters (Fig. 2). Together, these results demonstrate no significant change in data quality between slide versions, simplifying downstream analysis and enabling seamless integration with existing V 2.0 datasets.



**Figure 2. MERSCOPE Slides V 2.5 preserve MERFISH counts, clustering, and spatial localization across tissue types.** Side-by-side comparison of MERSCOPE Slides V 2.0 (pink) and V 2.5 (teal) using a fixed frozen mouse brain TMA (left column) and fresh frozen human skin (right column). **(A)** MERFISH 2.0 transcript counts per 100  $\mu\text{m}^2$ . Mouse brain TMA data shown for Large slides; fresh frozen human skin shown for both Standard and Large formats. Bars represent mean  $\pm$  SD; MERSCOPE Slides V 2.5 yielded equal or higher counts than V 2.0 in every condition tested. **(B)** Joint-embedded UMAPs of single-cell gene expression show near-complete overlap between V 2.0 and V 2.5 data, indicating preserved clustering and no detectable batch effects. **(C)** Spatial maps of Leiden clusters projected onto a representative mouse brain core from the TMA (left) and a fresh frozen human skin section (right) show matching anatomical distributions between V 2.0 and V 2.5, demonstrating preserved spatial fidelity.

## Built for your existing MERFISH workflow

MERSCOPE Slides V 2.5 deliver clearer markings, more confident tissue placement, and improved gel formation while preserving the data quality of V 2.0. Existing MERSCOPE and MERSCOPE Ultra users can adopt V 2.5 slides with no protocol changes and integrate the resulting data directly with their V 2.0 datasets.

To order or learn more, contact your Vizgen representative or visit [vizgen.com](https://vizgen.com).