

FFPE Sample Preparation for ChipCytometry Quick Guide

Below are the guidelines outlining FFPE tissue section preparation for ChipCytometry assays for in-house analysis.

A. Preparing FFPE Tissue Sections

- Using a rotary microtome, cut 5 µm thick sections from FFPE tissue blocks.
- Mount the sections on the adhesive coverslips **provided by Canopy Biosciences** in a 40°C water bath. Sample section should be placed on the coverslips in the area indicated in Fig. 1. Any tissue outside this area will not be scanned.
- Bake the sections at 60°C for 60 minutes to remove residual moisture. Sections can now be stored at 4°C or deparaffinized and rehydrated.

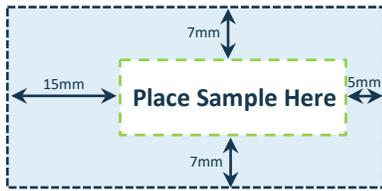


Fig. 1 | Coverslip area for samples placement

B. Deparaffinization

- Working under a fume hood, perform the following incubation steps on the tissue-mounted coverslips.

i. 5 min in xylene	iv. 5 min in fresh 100% EtOH	vii. 5 min in 50% EtOH
ii. 5 min in fresh xylene	v. 5 min in 90% EtOH	viii. 5 min in diH ₂ O
iii. 5 min in 100% EtOH	vi. 5 min in 70% EtOH	

C. Antigen Retrieval

- Heat a staining jar of CC1 antigen retrieval solution (Ventana, Cat.No. 950-124) in a water bath to 95°C. Place tissue-mounted coverslips in the solution for 20 min.
- Transfer the sections to RT ZKW Wash Buffer for 5 minutes.

D. Mounting Coverslips on ZellSafe™ Tissue Chips

- Clean the inner surface of a ZellSafe™ Tissue Chip with EtOH and a lint-free wipe.
- Remove the tissue-mounted coverslip from the ZKW Wash Buffer and dry the edges of the coverslip where the glass will meet the adhesive chip. Take care to not touch the tissue or allow it to dry out.
- Remove the adhesive film from the ZellSafe™ Tissue Chip and adhere the coverslip such that the tissue is facing the inside of the channel. Apply gentle pressure to the edges, avoiding putting pressure on the channel.
- Attach a funnel to the inlet and rinse 2x 1mL ZKW sterile Storage Buffer, taking care to avoid bubbles by filling slowly with the pipette tip inserted to the base of the funnel.

Note: Exchange with sterile ZKW Storage Buffer after approximately one year to avoid contamination.

- Seal the inlet and outlet with plugs. Store samples at 4°C.

Note: Using coverslips other than those provided by Canopy Biosciences will result in incompatibility with the ZellSafe™ Chips.