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Surface Staining of Cells on ZellSafe™ Chips Quick Guide

Below are the guidelines describing how to stain cells that are immobilized in ZellSafe™ chips with antibodies against biomarkers located on the cell surface.

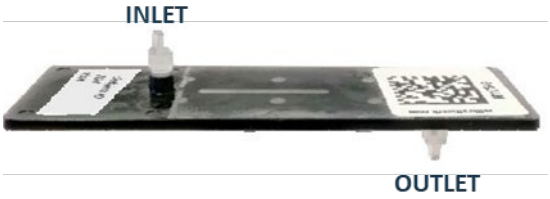

Fig. 1a | ZellSafe™ chip with sealing plugs blocking the inlet and outlet

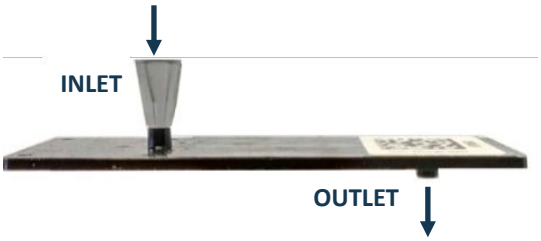

Fig. 1b | ZellSafe™ chip with pipette adapter

A. Preparation of Loaded ZellSafe ™ Chip

1. Place the chip with label side up in the ZKW Washing station. Remove the sealing plug from the inlet of the ZellSafe™ chip (Fig. 1a) while leaving the outlet plug sealed. **DO NOT DISCARD SEALING PLUGS AS THEY ARE REUSABLE.**
2. Pipette a few drops of ZKW Wash Buffer into the inlet to prevent air from being trapped during pipette adapter insertion.
3. Plug the pipette adapter into the inlet of the ZellSafe™ chip (Fig. 1b) and fill the adapter with ZKW Wash Buffer taking care to avoid air bubbles by either directly pipetting with the tip submerged in the liquid in the adapter or hovering the pipette over the adapter and adding wash buffer dropwise.
4. Remove the sealing plug from the ZellSafe™ chip outlet. Rinse the chip with 200 µl ZKW Wash Buffer, repeat 3 times. Make sure that all air bubbles are removed and that a flow is established.

B. Antibody Preparation and Loading

1. Dilute the antibody as titrated in an appropriate volume of ZKW Storage Buffer and mix properly. For ZellSafe™ Cell Chips use a total volume of 300µL, and for ZellSafe™ Rare Chips use 600µL.
2. Pipette the antibody solution dropwise into the chip inlet adapter and incubate for 5 minutes.
3. Wash with 1mL ZKW Storage Buffer.
4. Wash > 5 minutes at 1mL/minute with ZKW Wash Buffer. Wait 2 minutes and repeat 5-minute wash right before the scan.
5. Scan, and repeat wash cycle is any back diffusion is observed.

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