

OneArray™ Sealed Hybridization Chamber Guide

Model: FL for Human and Mouse OneArray™ Microarrays

Please note: This guide is a supplement to the OneArray™ Microarray User Guide



Specifications

Dimensions: 25 mm x 65 mm
Well size: 21.5 mm x 57.0 mm
Well depth: 0.15 mm
Well volume: 200 ± 10 µL

A. Preparation

1. Prepare an adequate amount of labeled RNA in 200 µL of hybridization solution.
2. The microarray requires conditioning before the chamber can be applied. Please refer to Step 3 on pages 14-15 of the OneArray™ Microarray User Guide for details.
3. Place the microarray on a flat surface with the barcode facing up.

B. Application

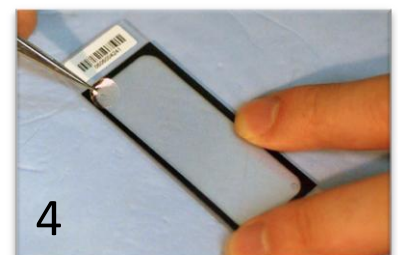
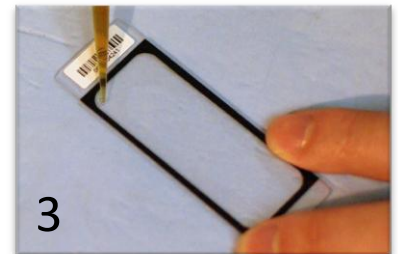
1. Remove the clear liner on the back of the hybridization chamber. It is easier to remove the liner from the tab-end.
2. Align the tab-end of the chamber to the edge of the microarray opposite to the barcode. It is easier to hold the long edges of the chamber in one hand and press down the tab with the other hand. (Figure 1)
3. Slowly guide the chamber onto the microarray. If necessary, pivot the chamber at the tab-end to align the chamber to the microarray.
4. After the chamber has adhered, flip the microarray upside-down with the barcode facing down. On a hard and flat surface, use the applicator stick provided to press along the edges on the glass slide to ensure a secure seal. Visually inspect the seal; inconsistent patterns in the black adhesive may indicate an insecure seal. Re-use the applicator stick if needed. (Figure 2)
5. Allow the adhesive to set for at least 30 minutes at 42°C.



C. Filling and Sealing

Perform the remaining steps in low lighting conditions.

1. Pipette 200 µL of the labeled RNA solution through one port of the chamber while allowing air to escape through the other port. Filling is best performed while microarrays are warm (42°C). Make sure there are no bubbles in the pipette tip. It may help to place the microarray at an incline (20-45°) while filling to reduce bubbles. If air bubbles form within the chamber, light pressure may be applied to the surface to dislodge them. (Figure 3)
2. Wipe excess solution from the ports. Be careful not to draw solution from the chamber.
3. Cover ports with supplied circular seals. Seals should be removed from the liner and applied using forceps. The seals will adhere to most wet surfaces. (Figure 4)
4. Apply pressure to both seals simultaneously to ensure a secure adhesion.



D. Hybridization

1. Keep the chamber/microarray assembly at 42°C for 14-16 hrs. Rotation of the assembly during hybridization has been shown to increase the signal intensity.

E. Removal

1. Prepare the first wash solution of 2X SSPE, 0.1% SDS and warm to 42°C. More details can be found in the OneArray™ Microarray User Guide.
2. Remove the chamber/microarray assembly from the hybridization oven and completely submerge it under the wash solution. Use forceps to slowly lift and remove the chamber starting from the tab-end. Use the holes in the tab for a better grip. Be sure to keep the microarray under the wash solution during removal. (Figure 5)
3. Wash the array in the solution, and proceed to follow the remaining steps according to the OneArray™ Microarray User Guide.

