

Fig. 4 Assemble and disassemble the clips by holding the cassette stably with one hand while pushing on the clip firmly with the other hand. Resting a hand on a bench-top stably helps keep the cassette level and avoids undue agitation.

8. Place the HybSet™ on a level horizontal surface in an unstirred waterbath for the hybridization reaction. The waterbath should already be at the preset hybridization temperature.
9. After the reaction, keep the HybSet™ horizontal when removing it from the water-bath. Remove the retaining clips with minimal agitation as described in the illustration in Fig. 4. Then carefully remove the cover board (care is required to avoid splashing), and take the slide out of the base board chamber.

Important Note: The slide should be washed immediately with hybridization washing buffer, otherwise high signal background may occur.

Precautions

1. Before and after use: first wash with water, then clean again with distilled water, and dry with a clean paper tissue.
2. Recommended working temperatures for CapitalBio HybSet™ are in the range 0-100°C. Be careful to wear gloves when taking it out from the water-bath as the metal clips and cassette may be hot.
3. HybSet™ should be stored dry at normal ambient temperatures.

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CapitalBio HybSet™ Microarray Hybridization Cassette

Cat. No. 430010

User Manual

**For Laboratory Research Use Only
Not for Diagnostic Purposes**

CapitalBio Corporation

General Introduction

CapitalBio HybSet™ microarray hybridization cassette (hereafter as “HybSet™”) is designed to hold a 25mm×75mm microarray slide in an isolated environment to prevent evaporation of the hybridization solution.

Each HybSet™ consists of a grooved base-board, two brackets, a sealing ring (gasket), a cover board, and two metal retaining clips (**Fig. 1**). The sealing ring and metal clips ensure that the hybridization chamber remains closed and watertight in the waterbath, guaranteeing uniform temperature and humidity.

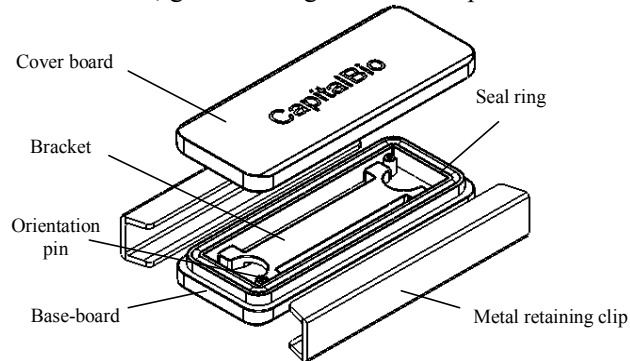


Fig. 1 HybSet™ components

Each HybSet™ can accommodate one standard slide (1 mm thick glass) with a standard coverslip, or a standard slide fitted with a CapitalBio SmartGrid™ multi-sample grid and covered with a CapitalBio SmartCover™ multi-sample cover slip.

Filling the base board of the HybSet™ with 200-300 µl of sterile water helps maintain optimal interior humidity.

The HybSet™ can be easily assembled and disassembled.

Instructions for use

1. Wash the HybSet™ with water first, then wash again with distilled water, and then dry thoroughly with a clean paper tissue.
2. Check that the sealing ring is set evenly in the perimeter groove of the base board and that it is intact (no nicks or breaks) (**Fig. 1**). Reset the sealing ring if it is not correctly seated in the groove. A broken sealing ring must be replaced before use.

3. Add distilled water in the base board to prevent evaporation of the hybridization solution (**Fig. 2**). The total volume permitted is 300 µl.

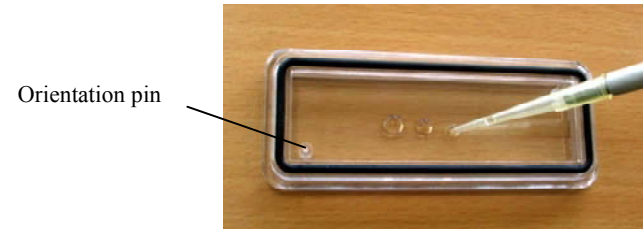


Fig. 2 Add 200-300 µl of deionized water to the base board.

4. Choose the thicker bracket for a standard slide, and the thinner one for slides with CapitalBio SmartGrid™ multi-sample grids attached. Place the bracket between the two orientation pins in the base-board.
5. Assure the microarray slide is printed-side-up before inserting it, then carefully place it between the two orientation pins into the chamber on the base-board.
6. Complete the assembly process according to the type of slide used:
 - A. For a standard slide (**Fig. 3A**), add hybridization solution onto the slide and cover it with a standard cover slip.



(A)



(B)

Fig. 3 Two uses of the HybSet™ hybridization cassette

- B. For a standard slide with both an attached SmartGrid™ and a SmartCover™ (**Fig. 3B**), add hybridization solution through each of the solution ports. Add appropriate volumes of sample solution into each of the microarray compartments.
7. Align the cover board and the base board. Slide the two metal retaining clips successively onto each side of the cassette, *see Fig. 4*. The metal retaining clips should be pushed flush to the edges of the cassette to ensure the cassette is leak-proof.

Important Note: Care is needed to prevent agitation of the cassette during positioning of the retaining clips to prevent spilling the hybridization solution.