



ZellChip Technologies Inc.
Single Cell Biochip-SCC-002
 Catalog number: 13-1004

Intended Use (For professional use only)

ZellChip Technologies Inc. Single Cell Biochip is intended for **in vitro diagnostic use** as a tool to monitor, observe, measure, or record a biological parameter of a cell, to separate a single cell from a group of cells and to culture a cell. Depending on reagents used in the assay Single Cell Biochip can be placed under the light or fluorescence microscope for reaction, observation and measurement.

Summary and Explanation

The ZellChip Technologies Inc. Single Cell Biochip relates to a biomicrofluidic device comprising fluid channels, fluid ports, and a cell retention structure. It is suitable for isolating most human or animal individual cells, Interpretation of the results can only be made by qualified and trained personnel.

Principle of the Procedure

The Single Cell Biochip allows for isolation of the live cell however it needs to be used in combination with certain reagents. Reagents can be delivered to the microfluidic device through the fluid channels or the fluid ports.

Materials and Methods

To use the Single Cell Biochip properly it must be used in correct orientation See Fig 1. The Company logo should be on the right side.

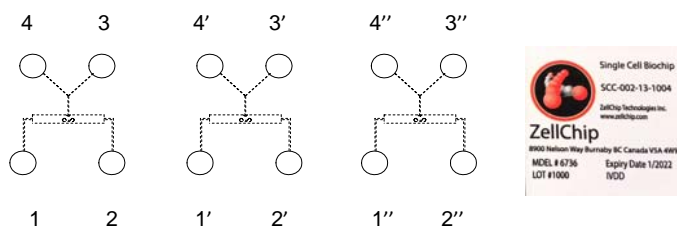


Fig.1 Single Cell Biochip orientation (triple units)

Measurement of drug uptake in a cancer cell Assay protocol

1. Take a Single Cell Biochip out of the package
2. Put the Biochip on the bench so that the Chip Label faces up and is on the right side, see Fig 1. There are triple units each consisting of four reservoirs.
3. For the use of one unit, put in 2 mL of cell suspension (density of 50,000-100,000 per mL) into reservoir 1
4. Put in solution buffer (2 mL) in reservoir 3
5. Observe the flow of cells into the cell retention structure toward reservoir 2, but not reservoirs 3 and 4.
6. Adjust the amount of liquid (in portions of 0.5 mL) put in reservoir 1 to increase or in reservoir 2 to decrease the liquid flow
7. When a desired cell reaches the entrance of the retention structure S add solution buffer (1 mL) in reservoir 3 to push the cell into the retention structure
8. Add a solution of fluorescent dye (3 mL) to reservoir 4. Note that 3 mL

- dye (2 mg/mL) in reservoir 4 and 3 mL buffer in reservoir 3 will result in 1 mg/mL dye interacting with the cell.
9. Note the fluorescent intensity of the cell, image after 15 min.
10. Replace reservoir 3 with 3 mL of uptake enhancer solution. Note that 3 mL dye (2 mg/mL) in reservoir 4 and 3 mL enhancer (200 mg/mL) in reservoir 3 will result in 1 mg/mL dye plus 100 mg/mL enhancer interacting with the cell.
11. Step 10 can be replaced with the drug solution chosen by the user.
12. Note fluorescence intensity of the cell for a change, image after 15 min.

Required reagents (not provided)

- Fluorescent dye
- Uptake enhancer
- Solution buffer
- Cell suspensions
- Drug formulation

For guidance about specific assays and experiments contact ZellChip Technologies Inc.

Limitations of the Procedure

- The procedures described in this manual must be performed by qualified and trained laboratory personnel.
- Optimal assay results are dependent on cell quality; improper handling or processing may introduce artifacts.
- Interpretation of the results must be made by authorized and trained personnel and only when appropriate controls are used.

Storage Information

Store in a room temperature. shown on the outer box label.

Upon Receiving:

- Open the package.
- Check that content is intact.
- If Single Cell Biochip is broken contact ZellChip Technologies Inc.

Specimen Collection and Preparation for Analysis

A variety of cell (human or animal) can be used to perform assays.

Symbols used on the chip labels

- Manufacturer's Catalog Number
- Batch Code
- Use By (Expiry Date)
- Manufacturer
- In Vitro Diagnostic Medical Device
- Consult Instructions For Use

Contacting ZellChip Technologies Inc.

For a troubleshooting guide and list of recommended supplies, contact ZellChip Technologies Inc. or visit www.zellchip.com

ZellChip Technologies Inc.
8900 Nelson Way,
Burnaby BC Canada V5A 4W9
Tel. 778-782-945
Website: www.zellchip.com