iBiochips

Protocol for 1CellAssay® Lysis Kit

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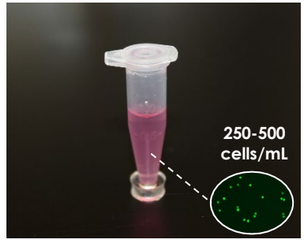
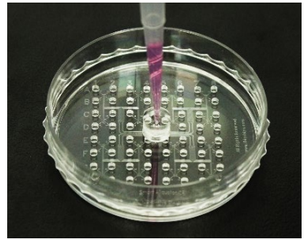
Prepare Initial Cells



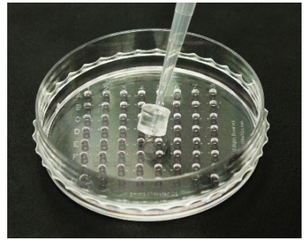
Prepare an initial cell suspension into a cell culture medium, PBS buffer, or other solution. Fully suspend the cells and pipette up 130 µL of cell suspension containing 32-64 cells.

Isolate Single Cells



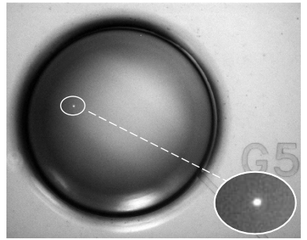
Load 130 µL of suspension into 1CellDish. Vertically insert the pipette tip into the Inlet Adaptor. Press the pipette plunger down to its first stop. Hold it for about 20 seconds. DO NOT release.

Remove Inlet Adaptor



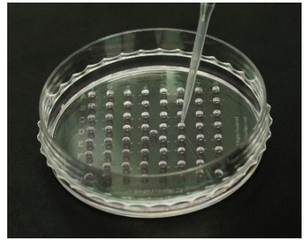
After the solution flows out, keep holding the pipette to prevent backflow. Then tilt the tip to detach the Inlet Adaptor from the 1CellDish. Discard the pipette tip and Inlet Adaptor.

Identify Single Cells



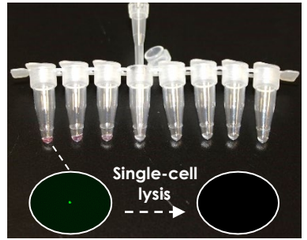
Check all the wells containing single cells with a microscope. Bright-field or fluorescence with a 10x objective is typically recommended. Write down well labels with target single cells. The yield should be ~20.

Retrieve Single Cells



Retrieve the target single cell by setting a pipette to 2 µL and pipetting each well up and down 3-5 times. After the target cell is fully suspended, rapidly retrieve the suspension from the 1CellDish.

Lyse Single Cells



Transfer 2 µL of single-cell suspension in 1 tube and then add 2 µL of lysis buffer in 1 tube to get 4 µL of single-cell lysate for downstream analyses, e.g. single-cell PCR, sequencing, and multi-omics assays.

Applications

- Single-Cell Isolation from Cell Lines and Primary Cells
- Single-Cell Lysis in a Small Volume
- Single-Cell PCR & Sequencing
- Single-Cell Multi-omics Assays

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