

User Guide

MultiScreen®-MIC Plate

MAMIC3S10, MAMIC5S10, MAMIC8S10

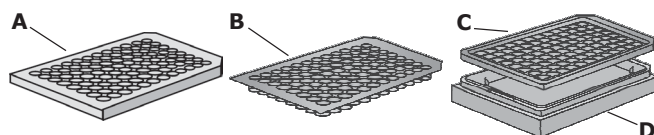
Introduction

The MultiScreen®-MIC (Migration, Invasion, Chemotaxis) plate is a 96-well disposable device for use in functional assays for screening protein libraries and compound leads for drug discovery. It is designed to support high-throughput cell-based functional assays such as Migration, Invasion, and Chemotaxis with suspension and/or adherent cell lines, using a single device. The plates can be used to perform and quantify Cell Migration or Invasion across coated or uncoated membranes in response to a concentration gradient. The MultiScreen®-MIC plates are available in several pore sizes to accommodate MIC assays with a variety of cell lines and are intended for single use only.

Materials Supplied

The MultiScreen®-MIC device consists of the following parts:

- A – Lid
- B – 96-well filter plate
- C – 96-well receiver plate
- D – Single-well tray



Device Storage

Store at room temperature.

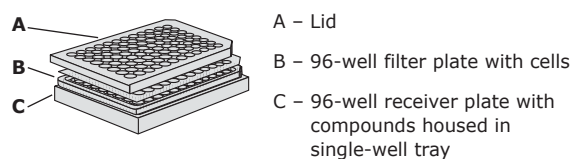
Setting up MultiScreen®-MIC Plates for Migration Assays

NOTE: Steps 1–4 must be performed using standard cell culture aseptic technique.

1. Disassemble the MultiScreen®-MIC plate by removing the filter plate and placing it in a sterile single-well cell culture tray (Cat. No. MAMCS0110).
2. Add compounds for evaluation to the wells of the teardrop receiver plate.
NOTE: The recommended volume is 150 μL per well.
3. Add cells at desired density to wells in the filter plate.

NOTE: The recommended volume is 50–75 μL per well.

4. Gently reassemble the MultiScreen®-MIC plate as shown below.
5. Incubate the plate at 37 °C for desired length of time.
6. Gently disassemble the plate.
NOTE: To prevent spillover or cross-talk into adjacent wells during disassembly, aspirate cells from upper filter wells prior to step 6.
7. Evaluate the cells that have migrated to the receiver plate by using a pre-standardized detection method such as microscopic counting, image analysis, or labeling cells with a fluorescent dye.



Setting up MultiScreen®-MIC Plates for Invasion Assays

NOTE: Steps 1–5 must be performed using standard cell culture aseptic technique.

1. Coat the filter wells with a pre-optimized concentration of extracellular matrix (the concentration of extracellular matrix is cell line specific). The recommended volume to coat the wells is 30–50 μL per well.
2. Disassemble the MultiScreen®-MIC plate by removing the filter plate and placing it in a sterile single-well cell culture tray (Cat. No. MAMCS0110).
3. Add compounds for evaluation to the wells of the teardrop receiver plate.
NOTE: The recommended volume is 150 μL per well.
4. Add cells at desired density to wells in the filter plate.

NOTE: The recommended volume is 50–75 µL per well.

5. Gently reassemble the MultiScreen®-MIC plate as shown on previous page.
6. Incubate the plate at 37 °C for desired length of time.
7. Quantify the cells that have invaded the underside of the filter plate membrane with a pre-standardized detection method such as staining (e.g., Fisher HealthCare™ PROTOCOL™ Hema 3™ Fixative and Solutions), or detach cells from the membrane underside into the receiver plate for subsequent labeling with a fluorescent dye.

Specifications

Materials of Construction

Housing Tray (Lid, Filter plate, single-well)	Clear polystyrene
Receiver plate	PETG

Membrane

Membrane	Polycarbonate
Active membrane area	0.3 cm ² /well (0.047 in ² /well)

Capacity

Filter wells	Maximum 350 µL
Receiver plate wells	Maximum 400 µL

Typical Operating Volume

Filter Wells	50–75 µL
Receiver Plate Wells	150 µL

Properties

Filter plate	Plasma treated
Sterilization	Gamma irradiation (all components)

Limitations

Incubation	37 °C, (98.6 °F) 95% relative humidity
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Product Ordering

Purchase products online at SigmaAldrich.com.

Description	Qty	Cat. No.
MultiScreen®-MIC plate, 3 µm	10/pk	MAMIC3S10
MultiScreen®-MIC plate, 5 µm	10/pk	MAMIC5S10
MultiScreen®-MIC plate, 8 µm	10/pk	MAMIC8S10

Accessory Products

Single-well cell culture tray	10/pk	MAMCS0110
96-well receiver plate	10/pk	MAMCS9610

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Standard Warranty

The applicable warranty for the products listed in this publication may be found at SigmaAldrich.com/terms.