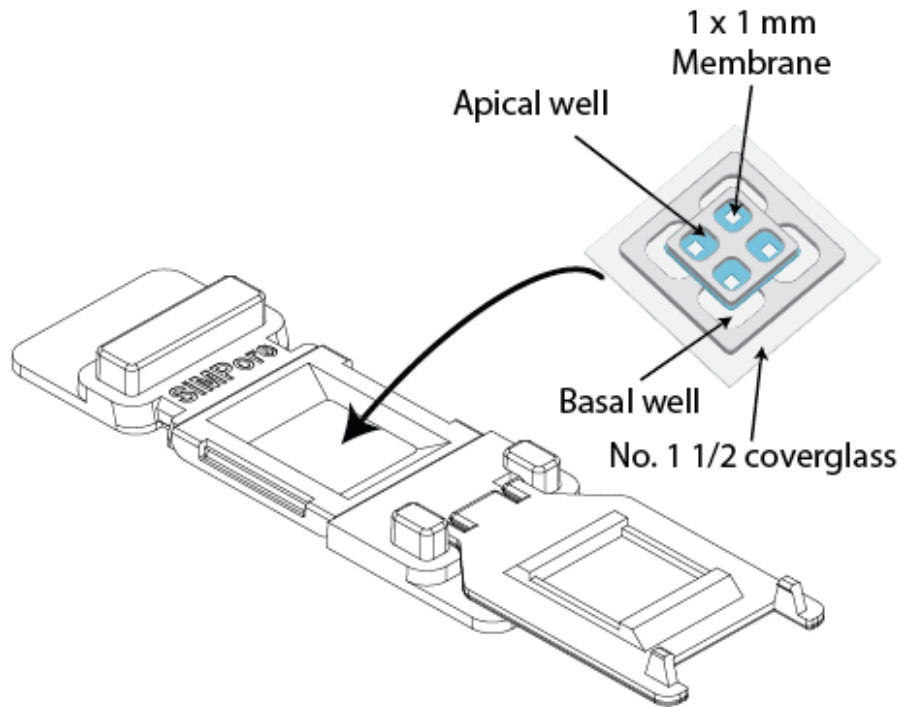


CytoVu[®]

Live imaging of membrane-supported cell culture



**CytoVu[®] is for research use only
and not for use in diagnostic or clinical applications.**

Customer Service

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Order Information

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OPERATIONS

Required Equipment

- ◆ Pipette and tips (2-200 μ L)
- ◆ Autoclave for sterilization
- ◆ Standard cell culture media and incubation equipment

Instructions

Please read all instructions and notes before proceeding.

1. Remove slide carrier from plastic bags and remove inspection label. Do NOT press glass window. The glass is thin for imaging purposes and is therefore delicate.
2. Sterilize CytoVu® slide and cap by autoclaving with a standard dry cycle.
3. For improved cell adhesion, incubate CytoVu® with cell media for at least two hours prior to seeding, first adding the specified volume of media to the basolateral well. Membranes can also be exposed to ECM proteins in solution prior to cell seeding if desired.
4. Before proceeding to add media to the apical well, invert the CytoVu® slide to visually verify the media has completely covered the basolateral well and that no air bubbles are present. Fluid should not drip out of the basolateral wells when the slide is inverted. If complete loading was not achieved, gently pipette the media out of the basolateral well with the slide in the normal orientation and repeat loading.
5. After the basolateral well is filled, add the specified volume of media to the apical well and incubate.
6. Gently aspirate the incubation media just prior to seeding cells.
7. To seed cells on the bottom surface of the membrane, pipette suspended cells ($4-8 \times 10^5$ cells/mL) into the basolateral wells and then invert CytoVu® to allow cells to settle onto the membrane surface.
8. After two (or more) hours of incubation, the cells should have attached to the membrane surface. Flip CytoVu® back to the normal orientation and gently aspirate the media to remove any unattached cells. Load fresh culture media into the basolateral wells.
9. Pipette suspended cells ($4-8 \times 10^5$ cells/mL) into the apical wells if desired, and allow cells to adhere for two (or more) hours in the incubator before aspirating unattached cells. Replace aspirated media with fresh media, being careful to not allow cells to dry out.
10. Replace the CytoVu® cap to cover the membranes and place the slide either directly in the incubator or within a petri dish. CytoVu® is designed to be stackable to preserve space.

Media Volumes

Basal Well Depth (μ m)	Apical Well (μ L)	Basolateral Well (μ L)
300	10	10
1000	10	25

Notes

- ◆ Due to the extreme thinness of CytoVu® membranes, it is important to aspirate as gently as possible. Do not directly touch the membrane with a pipette tip. Vacuum aspiration may be too harsh in some laboratory environments. In these cases, gently use a hand pipette.
- ◆ If you have trouble accessing the basolateral wells, tilt the slide away from the pipette tip before introducing the fluid. A fine tip pipette such as gel loading tip can also be used. Take care to not puncture or directly touch the membrane.
- ◆ If cells are not being grown in either the apical or basolateral wells, culture media should still be added to both wells to prevent evaporation at the membrane interface.
- ◆ Inspect slides under a microscope periodically to ensure membranes are still intact before proceeding with experimental procedure.
- ◆ Cells may take longer to establish adhesion on membranes without NanoBarrier™ technology (C100-MP3, C300-MP3, C1000-MP3, C100-MP8, C300-MP8, C1000-MP8) and therefore need longer attachment times.
- ◆ Additional information is available at www.SiMPoreStore.com/help.asp under "CytoVu® Frequently Asked Questions".

SPECIFICATIONS

Sterilization

CytoVu® slides can be sterilized by autoclaving after removing from plastic bag.

Chemical Stability

Devices are incompatible with strong bases. Degradable NanoBarrier™ membranes (C100-NP50-D, C300-NP50-D, C1000-NP50-D) are designed to degrade over a period of 1-3 days in physiological buffers (pH 7 or greater). Membranes with NanoBarrier™ technology (C100-MP3NP50, C300-MP3NP50, C1000-MP3NP50, C100-MP8NP50, C300-MP8NP50, C1000-MP8NP50) are stable for at least 2 weeks, while standard membranes (C100-MP3, C300-MP3, C1000-MP3, C100-MP8, C300-MP8, C1000-MP8) are stable for at least 4 weeks in physiological buffers. The dissolution of the membrane is non-toxic and has not been shown to adversely affect cell viability.

Device Storage

Store in a clean and dry environment. Exposure to UV can damage polycarbonate slide carrier.

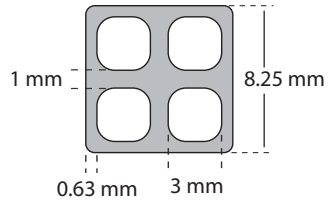
Datasheet for CytoVu® imaging slides

	CytoVu® 3 Micro				CytoVu® 8 Micro				CytoVu® Degradable	
NanoBarrier™ Technology	None		Present		None		Present		Degradable Present	
Thickness	0.1 µm		0.1 µm		0.1 µm		0.1 µm		0.1 µm	
Visible Pore Size	3 µm		3 µm		8 µm		8 µm		100 µm	
Effective Pore Size	3 µm		50 nm		8 µm		50 nm		100 µm - D	
Active Area (mm)	1 x 1		1 x 1		1 x 1		1 x 1		1 x 1	
Stability in Culture	4 weeks		2 weeks		4 weeks		2 weeks		1-3 days	
Sterility	Autoclave before use		Autoclave before use		Autoclave before use		Autoclave before use		Autoclave before use	
Part Number	C300-MP3	C1000-MP3	C300-MP3NP50	C1000-MP3NP50	C300-MP8	C1000-MP8	C300-MP8NP50	C1000-MP8NP50	C300-NP50-D	C1000-NP50-D
Basal Well Depth	300 µm	1000 µm	300 µm	1000 µm	300 µm	1000 µm	300 µm	1000 µm	300 µm	1000 µm
Basal Well Volume	10 µl	25 µl	10 µl	25 µl	10 µl	25 µl	10 µl	25 µl	10 µl	25 µl
Apical Well Volume	10 µl	10 µl	10 µl	10 µl	10 µl	10 µl	10 µl	10 µl	10 µl	10 µl
Recommended Cell Seeding Density	400 cells/µl		400 cells/µl		400 cells/µl		400 cells/µl		400 cells/µl	
Glass Support	No. 1 ½		No. 1 ½		No. 1 ½		No. 1 ½		No. 1 ½	
Slide Composition	Polycarbonate		Polycarbonate		Polycarbonate		Polycarbonate		Polycarbonate	
Gasket Composition	Medical Grade Silicone		Medical Grade Silicone		Medical Grade Silicone		Medical Grade Silicone		Medical Grade Silicone	
Chemical Incompatibilities - Membrane	Strong Bases		Strong Bases		Strong Bases		Strong Bases		Strong Bases	

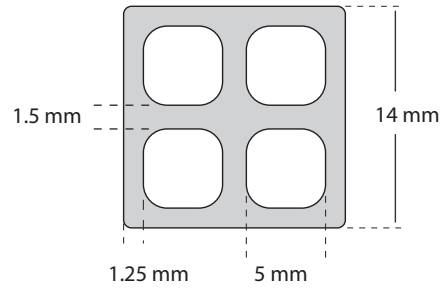
D – Degradable (initial effective pore size is from NanoBarrier™ 50 nm, degraded effective pore size is displayed above.)

SCHEMATICS

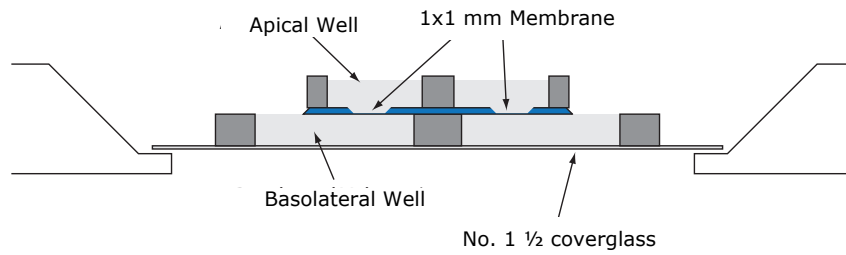
Apical Wells



Basolateral Wells



Cross Sectional View



STANDARD WARRANTY

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