

PRODUCT SPECIFICATION

MatTek PermaCell Cell Culture Inserts

MatTek PermaCell inserts are advanced cell culture devices used for the growth and differentiation of cells. The 8mm inserts are uniquely made to function as either standing or hanging inserts, allowing researchers increased flexibility when designing studies.

MatTek PermaCell inserts are sterile, single-use, individual 8mm inserts compatible with 6-, 12-, and 24-well culture plate formats. Various membrane types allow researchers to select inserts for specific needs, such as cell attachment, culture, differentiation, drug transport/permeability, and imaging studies.

Note: When working with MatTek PermaCell cell culture inserts, use aseptic techniques and appropriate culture media, reagents, and growth environments for specific cell types. Depending on the specific insert and cell type, this could include coating the inserts with an extracellular matrix (ECM) or other attachment aids.

SIZE SPECS



8 mm Specifications

Height (including feet)	8.8 mm
Height of Feet	0.8 mm
Outer Diameter	13.6 mm
Inner Diameter	8.8 mm
Membrane Area	0.6 cm ²
Membrane Pore Sizes	0.4, 8 μm
Solvent Compatibility	Same as polystyrene
Sterility	Gamma Irradiation, shipped sterile 24-well plates
Membrane Types	Polytetrafluorethylene (PTFE), Polyethylene terephthalate (PET), Polycarbonate (PC)

DIRECTIONS FOR USE

COATING INSERTS (OPTIONAL)

To ensure sterility, all steps listed below should be performed in a laminar flow hood or equivalent controlled environment.

1. Inserts come pre-packaged in 24-well plates.
2. Remove the plate from packaging and inspect inserts to ensure there are no defects.
3. Coat the inserts with an appropriate ECM or attachment following the manufacturer's recommendations. We recommend using between 100-200μl per 8mm insert.
4. After coating, the inserts are ready for plate set-up.

PLATE SET-UP

1. Prepare either the plate in which the inserts were shipped or a new plate by adding cell culture media to the basal compartment.
2. If moving MatTek PermaCell inserts to a new plate, use sterile forceps to transfer the inserts.
 - a. MatTek 8mm inserts can be used as both standing and hanging inserts. If used as standing inserts, pipet 0.3, 0.55, or 1.0 mL into the wells of a 24-well, 12-well, or 6-well plate, respectively.
 - b. If used as hanging inserts, transfer inserts into a hanging top 12-well plate (CCI12-HANGTOP, MatTek) or hanging top 24-well plate (CCI24-HANGTOP, MatTek).
3. Inoculate cells onto the insert and follow standard tissue culture incubation and feeding procedures for optimal cell growth.
 - a. Typical experiments inoculate cells onto the apical side of the membrane; however, experiments can also include inoculating cells into the well and/or onto the basal side of the membrane.

Membrane Type	Pore Size	Pore Density	Transparent in Culture	Insert Size	Count	Part No.
PET	0.4 μm	1 x 10 ⁹ pores/cm ²	No	24-well	24 inserts	CCI24-PET-0.4
PTFE	0.4 μm	1 x 10 ⁹ pores/cm ²	Yes	24-well	24 inserts	CCI24-PTFE-0.4
PC	0.4 μm	1 x 10 ⁹ pores/cm ²	No	24-well	24 inserts	CCI24-PC-0.4
	8 μm	1 x 10 ⁵ pores/cm ²	Yes	24-well	24 inserts	CCI24-PC-8

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