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3DCelMatrix™

Cat. No. TM076

Store at -20°C. Avoid multiple freeze-thaw cycles. Do **not** store in frost-free freezers. Keep frozen.

Product Description

Simple, reliable, physiologically relevant 3D cell culture.

3DCelMatrix™ is **abm's** ready-to-use extracellular matrix designed for fast and consistent 3D cell culture. Create spheroids, organoids, and tissue-like models with superior reproducibility and physiological relevance.

Cat. No.	Product	Quantity
TM076	3DCelMatrix™	10 ml

Key Benefits

- Supports a wide range of cells: primary, iPSC/PSC, tumor, and stem-like populations
- Consistent gelation and low batch variability
- Optimized for 3D growth, invasion, differentiation & drug screening
- Compatible with standard culture formats and high-content imaging

Applications

Oncology, organoid models, stem cell biology-including stem cell culture and iPSC reprogramming- along with toxicology, CRISPR studies, and high-throughput screening.

Protocol

Thawing and General Use

Thaw overnight on ice in 4°C refrigerator. Spray the vial top with 70% ethanol before use, and pipette gently with pre-chilled tips, switching tips whenever required to prevent clogging. Gelled 3DCelMatrix™ can be re-liquified by storing at 4°C for 24-48 hours.

Methods For Use

- The **Thin Gel Method** is ideal for plating cells on the gel surface.
- The **Thick Gel Method** supports growth of cells within a 3D matrix.
- The **Thin Coating Method** (no gel) creates a protein layer for cells to grow on top.

Coating and Culture Methods

Thin Gel Method:

1. Thaw 3DCelMatrix™ as recommended, mix using pre-chilled pipette tips.
2. While keeping the culture plates on ice, add 50 µl of 3DCelMatrix™ per cm^2 of growth surface.
3. Incubate at 37°C for 30 minutes.
4. If necessary, remove any un-gelled material and rinse using serum-free medium, taking care not to scratch the coated surface with the pipette tip. The plates are then ready for use.

Thick Gel Method:

1. Thaw 3DClMatrix™ as recommended, mix using pre-chilled pipette tips.
2. While keeping the culture plates on ice, add cells to 3DCelMatrix™ and suspend using pre-chilled pipettes. Add 150-250 µl of cell/3DCelMatrix™ mixture per cm^2 of growth surface.
3. Incubate at 37°C for 30 minutes.
4. Now culture medium can be added on top, and cells can be cultured.

Thin Coating Method:

1. Thaw 3DCelMatrix™ as recommended, mix using pre-chilled pipette tips.
2. Using serum-free medium, dilute 3DCelMatrix™ to desired concentration.
3. Evenly coat the culture vessel with the diluted 3DCelMatrix™.
4. Incubate at room temperature for one hour.
5. Remove any non-adherent material and rinse using serum-free medium, taking care not to scratch the coated surface with the pipette tip. The plates are then ready for use.

Note: To maintain a gelled consistency in Thin Gel and Thick Gel methods, avoid diluting 3DCelMatrix™ below 3 mg/ml. For Thin Coating, coating concentrations of 3DCelMatrix™ often range from 0.05 mg/mL to 0.2 mg/ml.