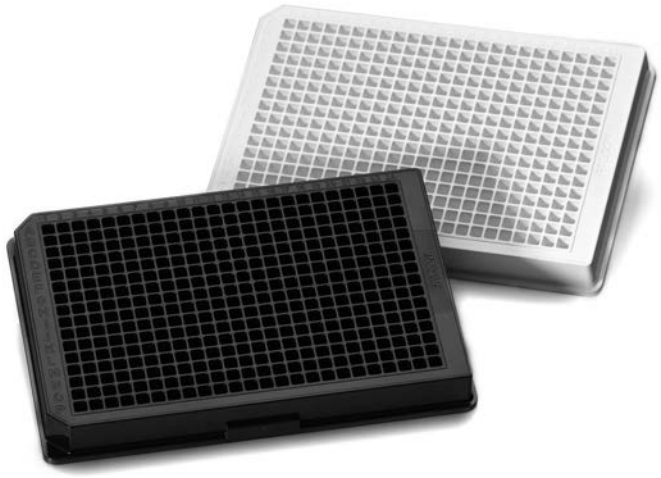
CORNING

Corning® Matrigel® Matrix-3D Plates

Convenient. Consistent. Certain.

3D cell culture models have become an increasingly important and complementary tool to 2D cultures in many areas of research. Spheroid and organoid models help create a more life-like environment, replicating tumors or organ function in support of areas such as drug discovery, disease modeling, personalized medicine, and cancer research.

Corning Matrigel matrix, a natural extracellular matrix (ECM)-based hydrogel, is widely used and referenced in 3D cell culture, in support of organoid and spheroid formation. As 3D cell culture models migrate into a high throughput environment, the need for more convenient, consistent, pre-coated Matrigel matrix options has emerged. Corning is pleased to offer Matrigel matrix-3D plates, a pre-coated, ready-to-use option available in 96-well and 384-well formats. Matrigel matrix is pre-dispensed into each well of these high throughput formats to support successful 3D cell culture. These products enable 'on-top/sandwich' and 'embedded' workflows to generate 3D cell cultures.



Convenient

The Matrigel matrix-3D plate pre-coated option reduces workflow steps for the researcher and eliminates the need to handle small volume ECM dispensation.

This convenient, off-the-shelf option helps researchers improve productivity in homogenous assays where 3D structures are grown and assayed directly in the plate.

Consistent

Corning has built-in quality control to ensure a consistent volume of Matrigel matrix is dispensed into each well. In fact, Z' values of high throughput assays conducted using Matrigel matrix-3D plates demonstrate robust assay and consistent plate-to-plate performance[1].

Matrigel matrix-3D plates reduce the manual inaccuracies of self-coating and gives researchers the convenience of a "plug and play" protocol to grow and assay 3D structures directly in the plate.

Certain

Corning Matrigel Matrix-3D plates have been shown to[1]:

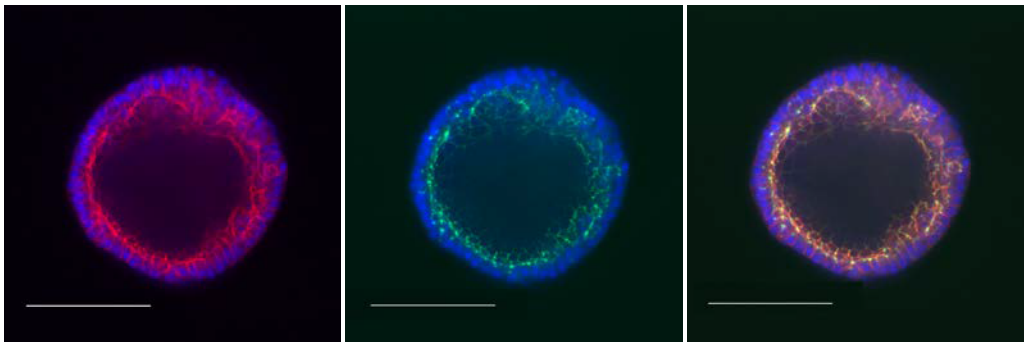
- Support formation of 3D polarized epithelial structures and cancer spheroids.
- Successfully support screening with drug compound libraries
- Provide a suitable format for drug discovery research using organoids (as per customer use).

As an optimized format for 3D cell culture, Corning Matrigel matrix-3D plates streamline workflow and deliver a consistent and convenient solution for a high throughput environment.

Application Areas

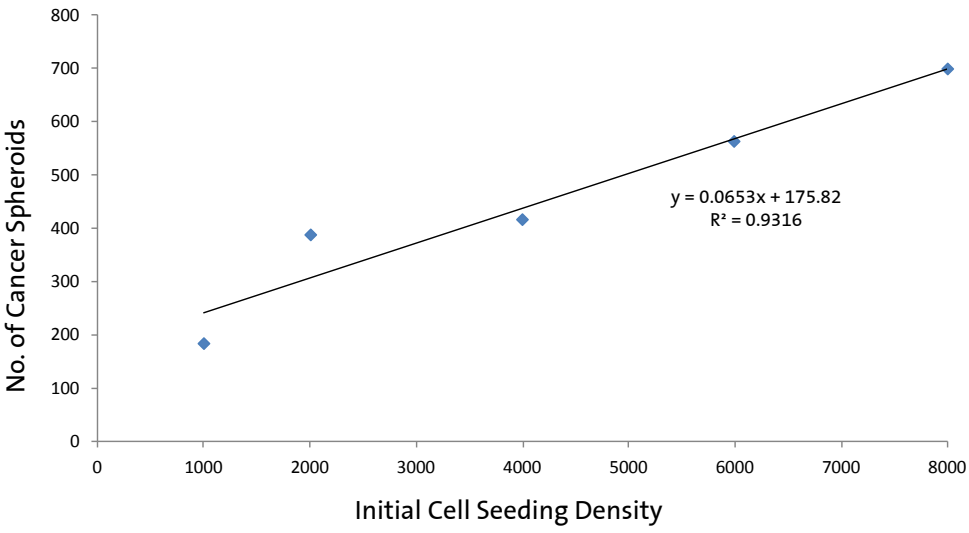
3D cell culture has been steadily increasing in drug discovery as it delivers more physiologically relevant models. Anti-cancer drug screening using spheroids, tumoroids, and organoids are considered better predictors of *in vivo* drug responses. The Corning® Matrigel® matrix-3D plates provide an *in vitro* assay format that allows for growth of cells in 3D for drug discovery applications.

Corning Matrigel matrix-3D plates support growth of polarized epithelial 3D structures[1]



MDCK cyst polarity. Representative photomicrographs of fluorescently stained MDCK cysts using a 20X objective. Blue is nuclei, red is phalloidin, and green is ZO1. Right image is overlay. Scale bar is 100 µm.

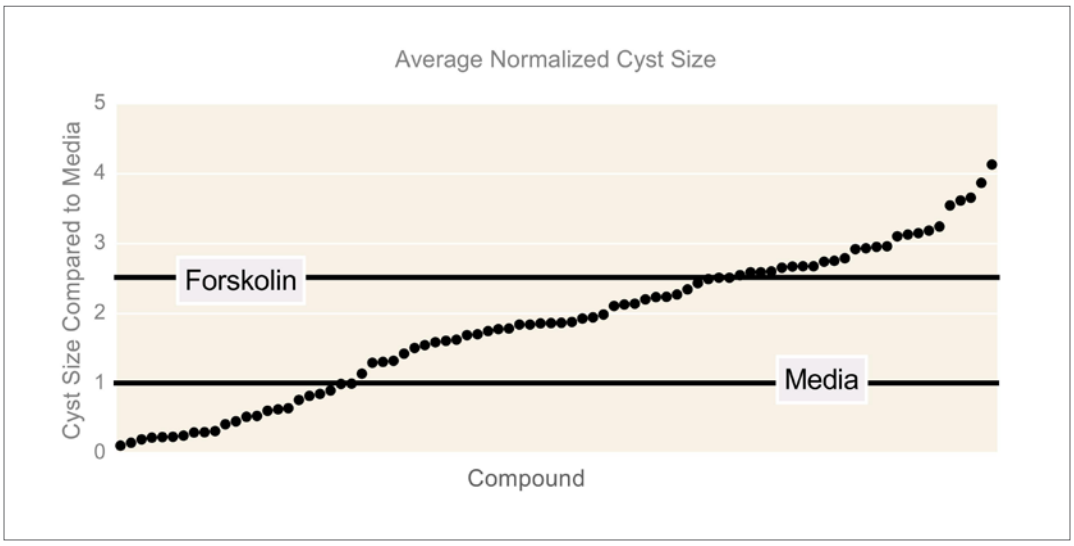
Corning Matrigel matrix-3D plates support growth of cancer spheroids



Corning Matrigel matrix-3D plates supports growth of prostate cancer spheroids. LnCAP prostate cancer cells were seeded onto a Corning Matrigel matrix-3D plate (96-well format) using 'on-top' workflow (n=≥16 wells/seeding density). After 4 days, plate wells were fixed with 4% paraformaldehyde and stained with a nuclear dye, DAPI. The whole well was scanned with a high-content imager using the acumen® Cellista (sptLabtech) laser system and spheroids were counted. A linear correlation was observed between the number of cancer spheroids and cell seeding density on a Matrigel matrix-3D plate.

Data provided by Dr. X. Fang, Postdoctoral Research Fellow; Harvard Medical School; Division of Hematology & Oncology; Beth Israel Deaconess Medical Center, MA, USA

Corning Matrigel matrix-3D plates successfully support screening with drug compound libraries[1]



Tocris kinase library screen. Average change in cyst area of screened compounds as a ratio of media response. Data is average of 4 wells per compound from 3 independent screens and sorted by effect on cyst size. Media and forskolin responses are marked for reference.

Ordering Information

Corning® Matrigel® Matrix-3D Plates

VWR Cat. No.	Corning Cat. No.	Description	Qty/Pk	Qty/Cs
76419-684	356259	96-well black/clear bottom microplate, individually packaged	1	1
76419-678	356256	384-well black/clear bottom microplate, individually packaged	1	5
76419-682	356258	384-well white/clear bottom microplate, individually packaged	1	1
76419-680	356257	384-well white/clear bottom microplate, individually packaged	1	5

References

1. Corning Matrigel Matrix-3D Plates for High Throughput 3D Assays.

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For additional product or technical information, visit **vwr.com/corning**, call 1.800.932.5000, or contact your VWR representative.

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