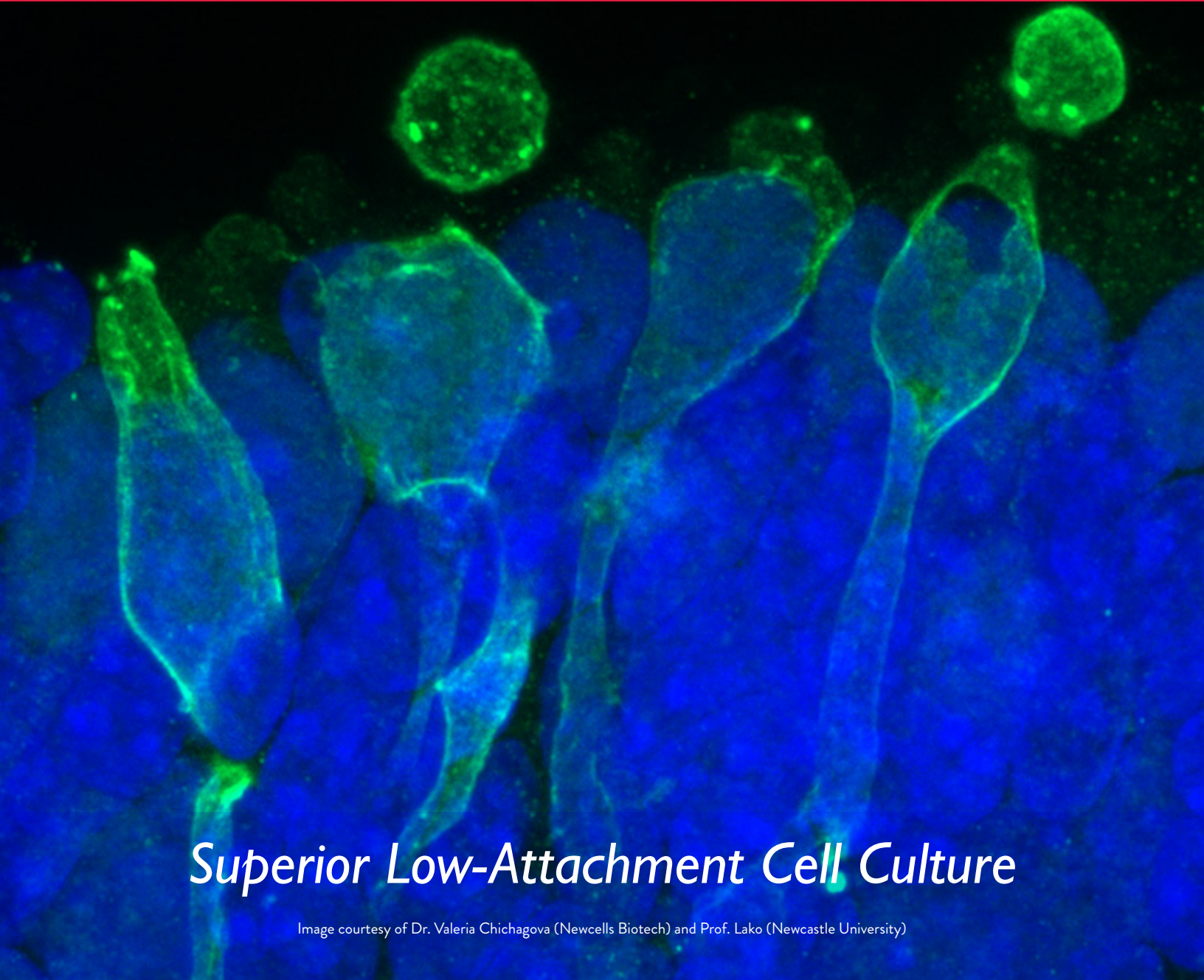


Lipidure[®] - Coat Plates

Organoids | Spheroids | Embryoid Bodies



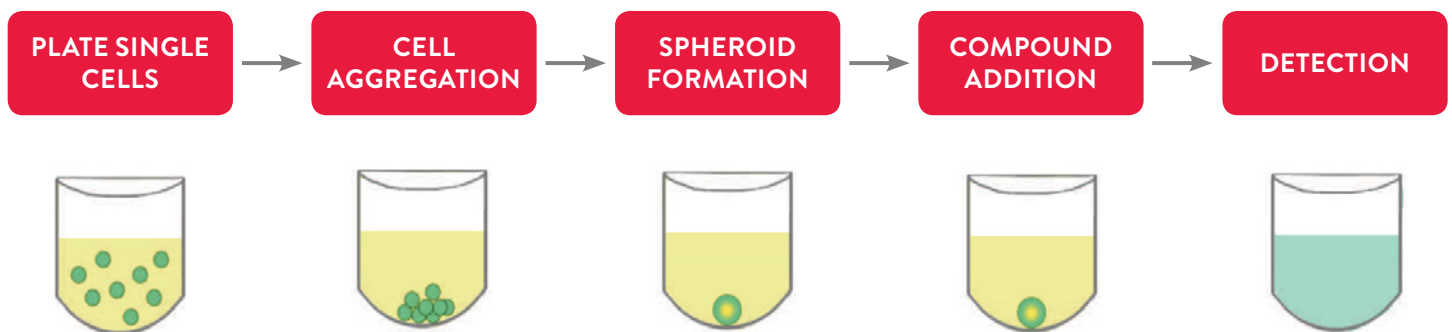
Superior Low-Attachment Cell Culture

WHAT ARE LIPIDURE®-COAT PLATES?

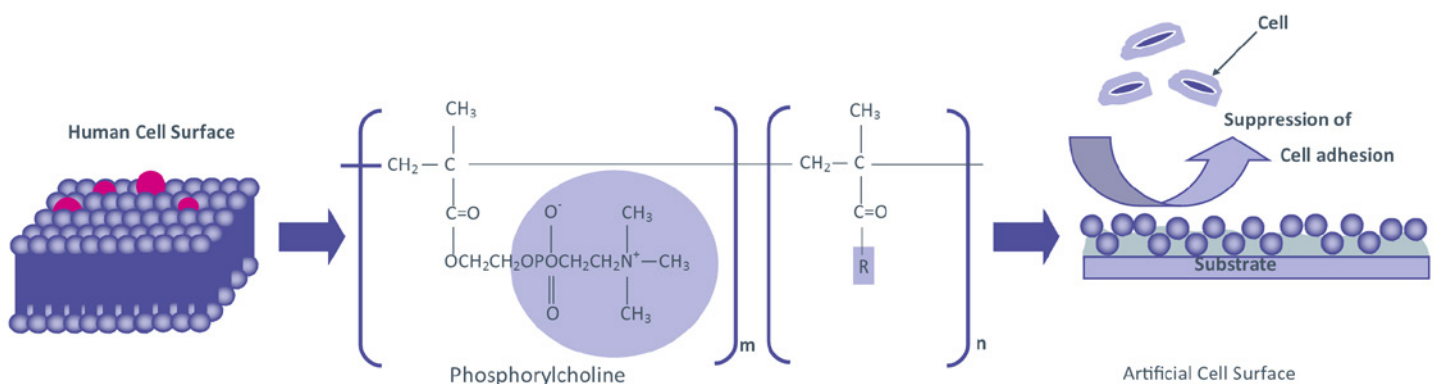
Lipidure®-Coat plates are one of the most effective tools for state-of-the-art 3D spheroid and Embryoid Body (EB) cell culture, and for differentiation of EBs into organoids. The Lipidure® coating provides a superior low-attachment for the formation of single body in each well of multi-well plates.

- Easy to handle
- Excellent reproducibility
- Compatible with cell-based assays
- High throughput drug screening
- Multiple formats - including 384-well

3D SPHEROID CULTURE TESTING ON ONE PLATE- NO TRANSFER STEP



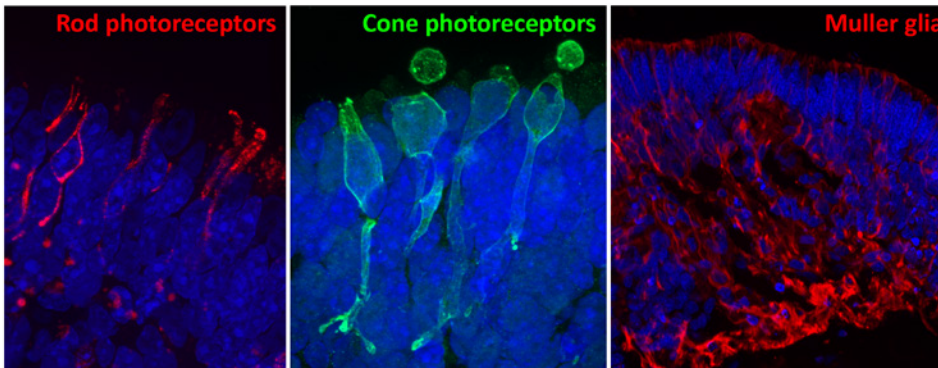
HOW DOES LIPIDURE®-COAT WORK?



1. Low-adhesion surface promotes cell aggregation & spheroid formation.
2. Uses MPC Polymer: a biocompatible polymer containing Phosphorylcholine (which is found in cell membranes).
3. Completely synthetic, contain no substances of biological origin.

SELECTED APPLICATIONS:

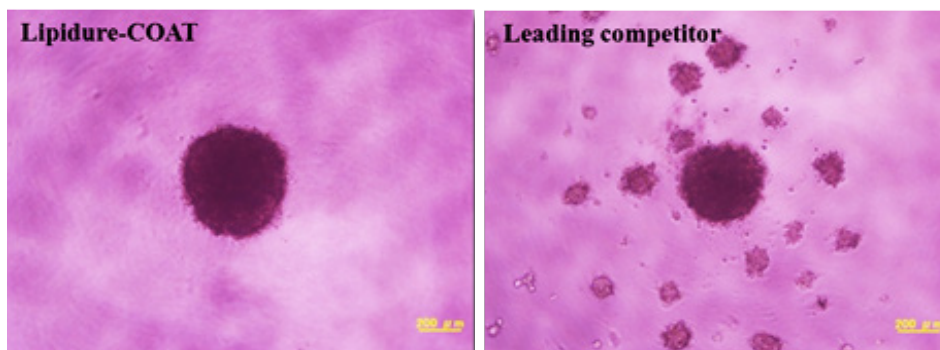
Organoid Culture



Retinal organoids continuously grown on Lipidure®-Coat plates from the start of differentiation. Immunofluorescence images of 150 day old organoids show rod and cone photoreceptors containing outer segments on the apical side and synaptic terminals at the base. Muller glial cells span across the entire thickness of retinal neuroepithelium.

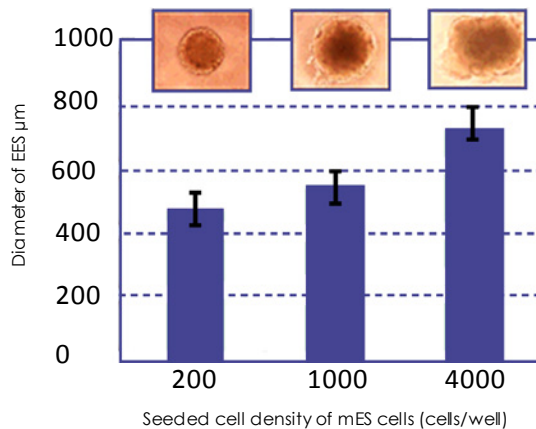
Image courtesy of Dr. Valeria Chichagova (Newcells Biotech) and Prof. Lako (Newcastle University).

Superior Formation of Single Spheroid on U-Bottom Plates



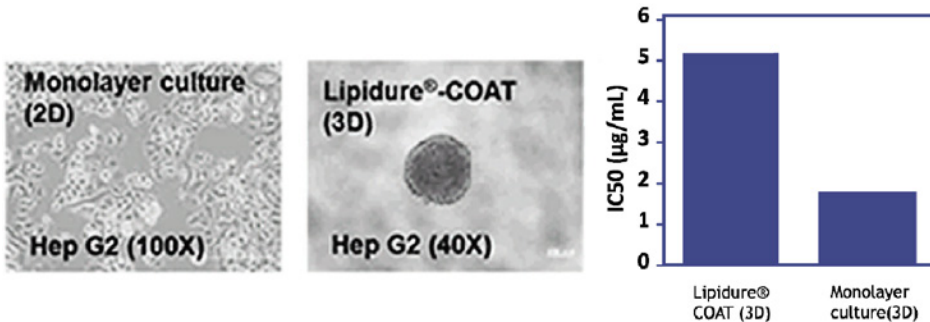
A single spheroid is generated in the Lipidure®-Coat well, while numerous satellite spheroids are found in the competitor's plates. This phenomenon shows that a lot of cells adhered to the competitor's "low-adhesion" surface.

Embryoid Body Formation



Example of embryonic bodies formed using variable starting densities of the murine ES cell line 129SV on Lipidure®-Coat Plate A-U96

Anti-Cancer Drug Tests



Spheroid formation and application in Anti-Cancer Drug tests Using Lipidure®-Coat. Hep G2 spheroids were formed for 5 days. Cell viability was determined by WST assay after further 2 days incubation with or without Mitomycin-C

Acknowledgements

We would like to thank Dr. Valeria Chichagova (Newcells Biotech) and Prof. Lako (Newcastle University) for providing us with images of retinal organoids continuously grown on Lipidure®-Coat plates.

“The Lipidure®-Coat plates provided by AMSBIO were extremely useful for generating with ease large numbers of homogeneous retinal organoids which responded to light and contained all the key retinal cell types.”

Prof. Majlinda Lako, Newcastle University

Selected Citations

- Nature, 2011, 472 (7341), 51. **Highly cited! (over 1 thousand times)**
Eiraku, M. et al. Self-organizing optic-cup morphogenesis in three-dimensional culture.
- Stem Cells, 2018, 36 (10), 1535-1551.
Hallam, D. et al. Human-induced pluripotent stem cells generate light responsive retinal organoids with variable and nutrient-dependent efficiency.
- Cell reports, 2017, 19 (1), 50-59.
Iefremova, V. et al. An organoid-based model of cortical development identifies non-cell-autonomous defects in Wnt signaling contributing to Miller-Dieker syndrome.
- The Journal of steroid biochemistry and molecular biology, 2019, 186, 122-129.
Suares, A. et al. Antineoplastic effect of 1 α , 25 (OH) 2D3 in spheroids from endothelial cells transformed by Kaposi's sarcoma-associated herpesvirus G protein coupled receptor.


Description	Pack Size	Cat. No.
Lipidure®-Coat Plates:		
Lipidure®-Coat Low Adhesion Plate A-U96 (96 well U-bottom plate)	6 plates	AMS.LCP-A-U96-6
Lipidure®-Coat Low Adhesion Plate A-V96 (96 well V-bottom plate)	6 plates	AMS.LCP-A-V96-6
Lipidure®-Coat Low Adhesion Plate A-F96 (96 well Flat-bottom plate)	6 plates	AMS.LCP-A-F96-6
Lipidure® Powder Also Available:		
Lipidure®-CM5206 (White powder)	1g	AMS.52000011GB1G
Lipidure®-CM5206 (White powder)	10g	AMS.52000012GB10G
Lipidure-CM5206 (White powder)	100g	AMS.52000012GB100G

384- and 1536-well formats also available

Bottom shape (Flat, U or V) can control size, position and density of spheroids / organoids

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V2

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