EASILY PRODUCE 3D SPHEROIDS WITH UNIFORM SIZE

AggreWell™ Plates

Three-Dimensional Cell Culture

Three-dimensional (3D) cell culture is more physiologically relevant than traditional adherent or single-cell culture methods. It provides a better representation of the in vivo microenvironment[1] and is widely thought to be more predictive of disease state and drug response.

AggreWell™ for 3D Spheroid Production

AggreWell™ plates provide an easy method to produce large numbers of 3D spheroids. Each well contains a standardized array of microwells, allowing the production of large numbers of spheroids in a single well. The size of spheroids generated in AggreWell™ is highly uniform and can be easily modified by adjusting the cell seeding concentration.

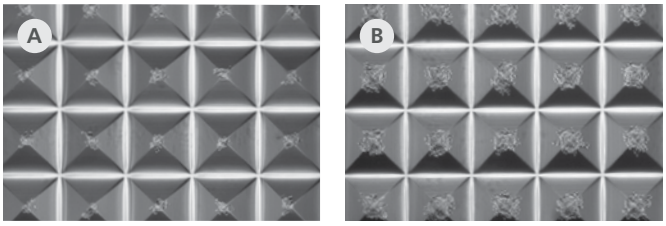


Figure 1. Spheroids Generated in AggreWell™ Plates

Starting from a single-cell suspension, cells form spheroids after 24-48 hours in AggreWell™. Shown are prostate cancer (DU145) spheroids in AggreWell™400 plates (A) 100 cells per microwell and (B) 500 cells per microwell.

Why Use AggreWell™?

HIGH YIELD. Generate up to 5,900 spheroids per well.

REPRODUCIBLE. Obtain large numbers of uniform-sized spheroids.

EASY TO USE. Simple spheroid generation from a single-cell suspension.

COMPATIBLE. Use with a variety of cell types.

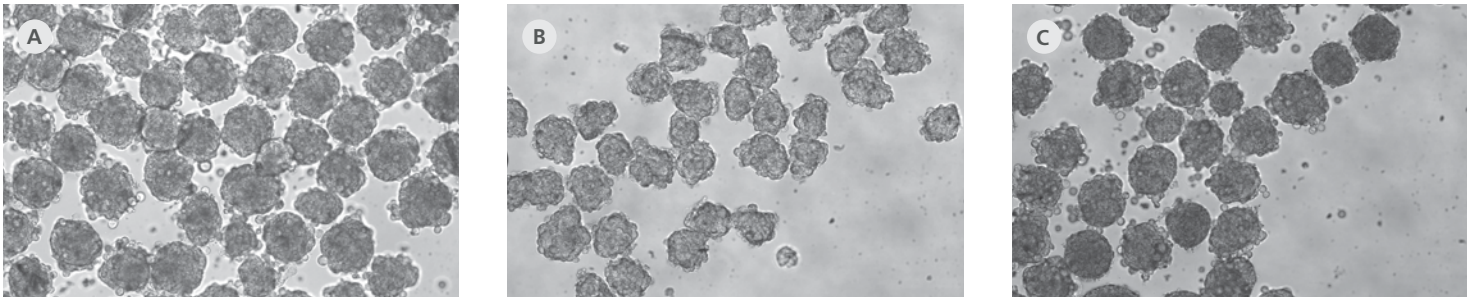
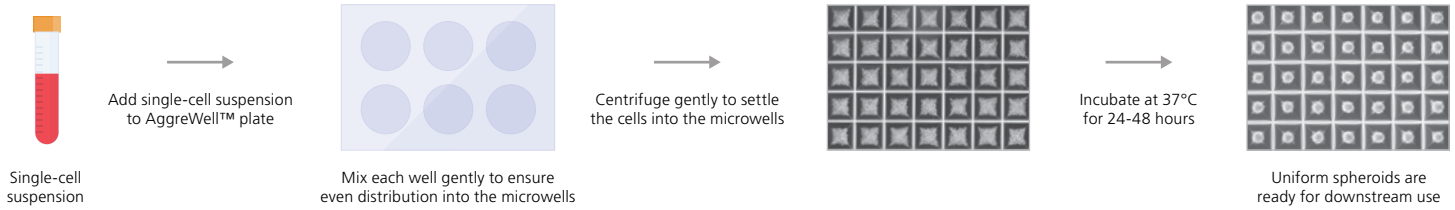


Figure 2. Cancer Spheriods Generated Using AggreWell™ Are Uniform in Size and Shape

(A) Colon cancer cell line HT29. (B) Prostate cancer cell line LNCap. (C) Esophageal cancer cell line TE6. All spheroids were seeded at 100 cells per microwell. Images are shown at 10X magnification. Images courtesy of Golsa Razian and Mark Ungrin, University of Calgary.

Formation of Spheroids in AggreWell™



AggreWell™ plates are available in 3 sizes of microwells and multiple plate formats to fit your research.

Product	Microwell Size	Cell Range	Plate Format	Number of Spheroids	Catalog #
AggreWell™400	400 µm	50 - 3,000 cells per spheroid	24-well plate	~ 1,200 per well	34411/34415
			6-well plate	~ 5,900 per well	34421/34425
AggreWell™800	800 µm	3,000 - 20,000 cells per spheroid	24-well plate	~ 300 per well	34811/34815
			6-well plate	~ 1,500 per well	34821/34825
AggreWell™HT	900 µm	50 - 20,000 cells per spheroid	96-well plate	~ 32 per well	200-0563/200-0570

Note: *AggreWell™ Rinsing Solution (Catalog #07010) is required for use with AggreWell™ plates to ensure optimal performance.*

AggreWell™ has been used in a variety of applications, including:

- Cancer research[2-6]
- Disease modeling[7-8]
- Cell signaling[9-10]
- 3D tissue generation and cell differentiation[11-15]
- Modeling embryonic development[16-18]
- Drug delivery[19-22]
- Bioprocess design[23]
- Suspension culture of traditionally anchorage-dependent cells[24-26]

Selected AggreWell™ Publications

1. Edmondson R et al. (2014) Assay Drug Dev Technol 12(4): 207-18.
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8. Moya M et al. (2013) Stem Cell Res Ther 4(Suppl 1): S15.
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10. Wallace L et al. (2013) Methods Mol Biol 989: 153-64.
11. Cho JH et al. (2013) Biomaterials 34(3): 651-61.
12. Cimetta E et al. (2014) Exp Biol Med 239(9): 1255-63.
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14. Kokkinaki M et al. (2011) Stem Cells 29: 825-35.
15. Sebastiano V et al. (2014) Sci Transl Med 6(264): 264ra163.
16. Ungrin M et al. (2008) PLoS ONE 3(2): e1565.
17. Yu L et al. (2021) Nature 591(7851): 620-6.
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19. Bratt-Leal A et al. (2013) Biomaterials 34(30): 7227-35.
20. Fey S et al. (2012) Toxicol Sci 127(2): 403-11.
21. Lim J et al. (2011) Acta Biomater 7(3): 986-95.
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24. Baraniak P et al. (2012) Cell Tissue Res 347(3): 701-11.
25. Cook MM et al. (2012) Tissue Eng Part C: Methods 18(5): 319-28.
26. Rettinger C et al. (2014) Cell TIssue Res 359(2): 395-405.