NEW

Akura™ 96 Spheroid Microplate
Quick Start Guide

Thank you for choosing InSphero's Akura™ 96 Spheroid Microplates for your 3D cell culture experiments. This Quick Start Guide contains important information to get you started immediately. For detailed instructions please refer to the Product Manual and additional resources on shop.insphero.com.

Akura™ 96 Spheroid Microplate Components

A. Akura™ 96 well plate

B. Transparent lid

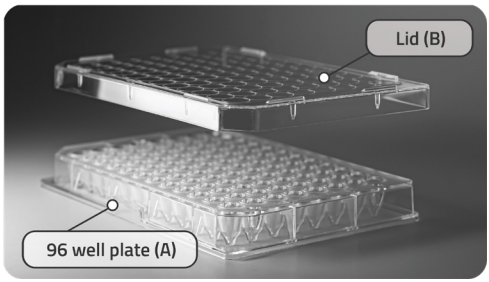
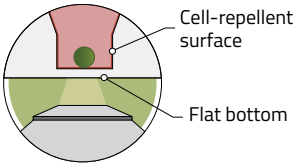
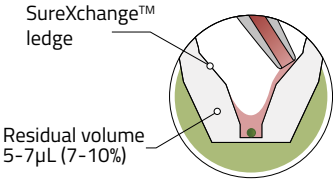


Figure 1. Akura™ 96 Plate components.

Advantages of the Akura™ 96 Spheroid Microplate

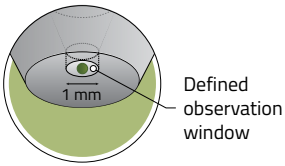
1. Convenient scaffold-free formation of 3D cell models via cellular self-assembly in ultra-low attachment (ULA-treated) polystyrene plates.





2. SureXchange™ tapered ledge and culture chamber facilitates easy medium exchange and prevents spheroid loss during long-term culture and analysis.

3. 1 mm diameter flat bottom observation window enables simple spheroid observation. In addition, the greater distance between observation windows of adjacent wells reduces well-to-well imaging crosstalk compared to standard 96 well plates.



Generating 3D Cell Culture Models Like Spheroids or Organoids

Important: *To prevent the inclusion of air bubbles, pre-wet the wells of the Akura™ 96 Plate by applying 40µl of medium to each well.*

1. **Cell seeding:** Count the cells and prepare a cell suspension for seeding, using a final volume per well of 70µl. For long-term culture start with low cell numbers (250 – 500 cells per well). If non-proliferating cells or rapid production of larger spheroids/organoids are required, then start with higher numbers (2,500 cells or more). You may wish to try several different concentrations to define your optimal range.

Important: *Ensure a homogeneous distribution of the cell suspension by gently pipetting up and down prior to seeding. Also, gently (≤ 10 µl/sec) add 70µl of cell suspension by placing the pipette tips near to, but not touching, the bottom of the wells.*

2. **Sedimentation spin:** It is recommended to briefly centrifuge the plate for 2 minutes at 250 RCF to remove air bubbles.
3. Tilt the plate in the incubator to approximately 30° to improve the maturation process.
4. Incubate the plate in a humidified CO_2 incubator at 37°C. Spheroid maturation typically occurs within 2-5 days of seeding depending on the cell type and culture conditions.

Medium Exchange in the Akura™ 96 Spheroid Microplate

1. Place the pipette tip at the ledge of the well (Fig. 3).
2. Remove the medium at low pipetting speed (<30 µl/sec) by aspirating an excess of volume. A minimal volume of ~5-7µl medium will remain in the well.
3. Add 70µl of fresh medium by placing the pipette tip at the ledge. Use a dispensing rate <50 µl/sec.
4. Place the lid on the Akura™ 96 Plate and place it in a humidified CO_2 incubator at 37°C.

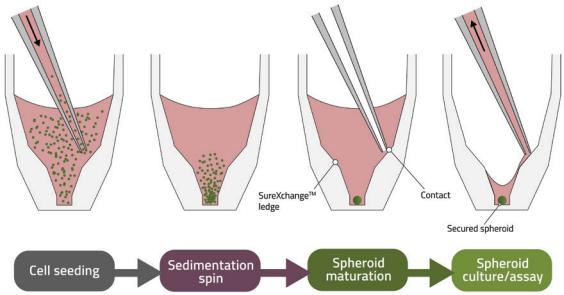


Figure 3. Spheroid formation in the Akura™ 96 Plate.

For detailed information, please refer to the Akura™ 96 Plate Product Manual.

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If you have more questions please refer to the FAQs section at shop.insphero.com

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