

SpheroSeev – Improving Your 3D Cell Culture

What is SpheroSeev?

- A recombinant bio-polymer fiber with the strength and elasticity of spidersilk, providing mechanical support and ECM-like environment to cells for spheroid formation in a consistent and reproducible manner.
- Use SpheroSeev in your drug discovery, stem cell research, cancer research and tissue engineering studies to better mimic natural morphology and behavior of cells, and reduce overall study costs.

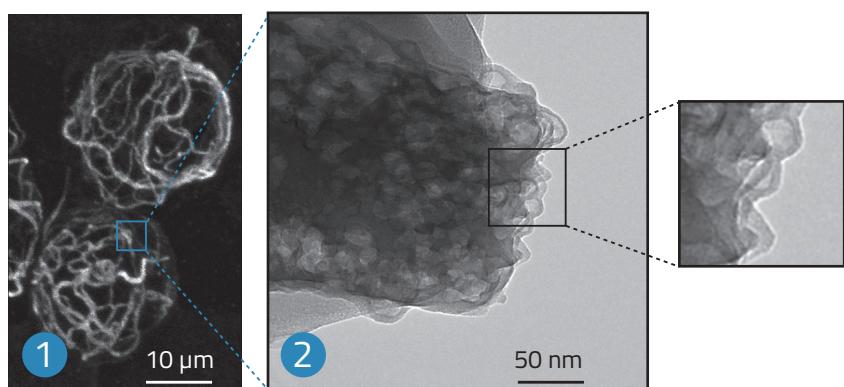
Why use SpheroSeev?

Combines the advantages of scaffold-based and scaffold-free technologies

Unique structure and properties:

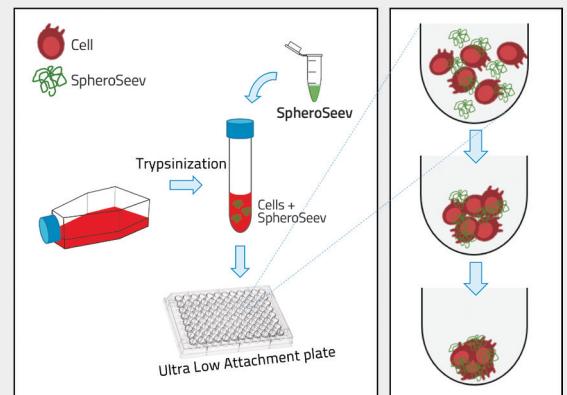
- ✓ SpheroSeev fibers' nano and micro dimensions are similar to the natural ECM, providing tissue-like environment for cells.
- ✓ SpheroSeev fibers have high porosity, enabling better access to oxygen and nutrients, thereby mimicking the function of vascularized tissue.
- ✓ SpheroSeev fibers have extra strength and elasticity, providing mechanical cushioning and protection to individual cells within the spheroid.

SpheroSeev nano-fibril structure with high surface area

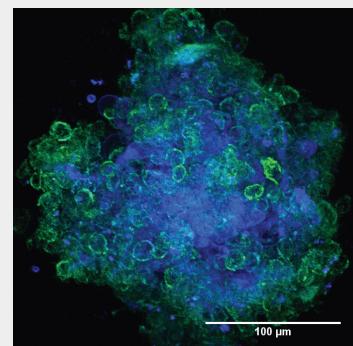


Ready and easy to use

- Minimal protocol adaption to switch from 2D or currently used 3D
- Maximum flexibility to manipulate the 3D cell culture environment for different needs
- Compatible with automated handling and imaging equipment
- High consistency for reproducible cell-based assays
- Do not degrade or alter over the course of an experiment
- Produced in a recombinant DNA process with high batch to batch consistency
- Long shelf life and sterile



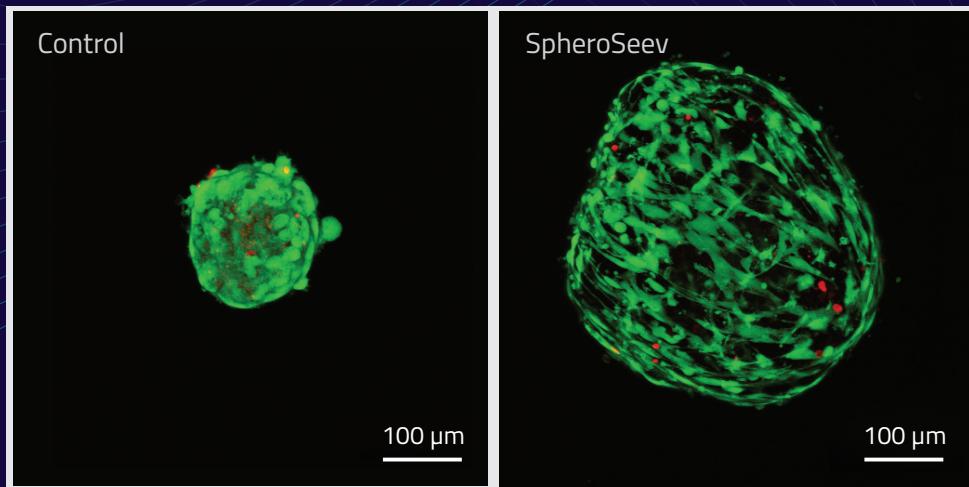
Simply add SpheroSeev fibers to the cells and mix well prior to seeding as spheroids in a low attachment plate. Fibers will integrate into the spheroid, improving viability and functionality of the cells.



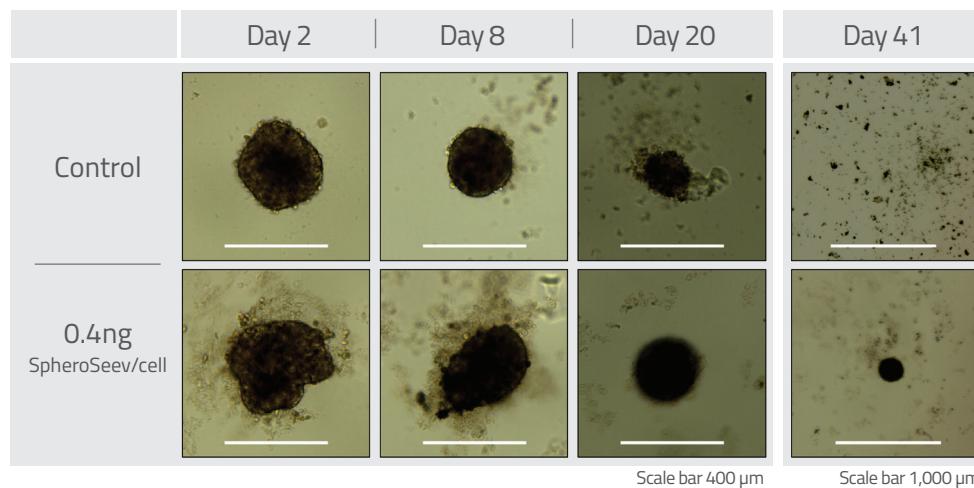
Confocal image of a spheroid containing SpheroSeev, stained with SVX-dye. SpheroSeev fibers are stained in green. Cells are stained in blue.

Increased spheroid viability and functionality:

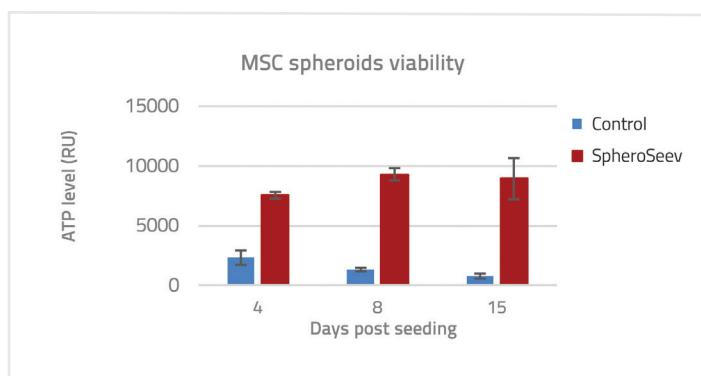
SpheroSeev enables cells to maintain their natural shape and interact with each other in a physiological manner improving their viability and functionality in the spheroid format.



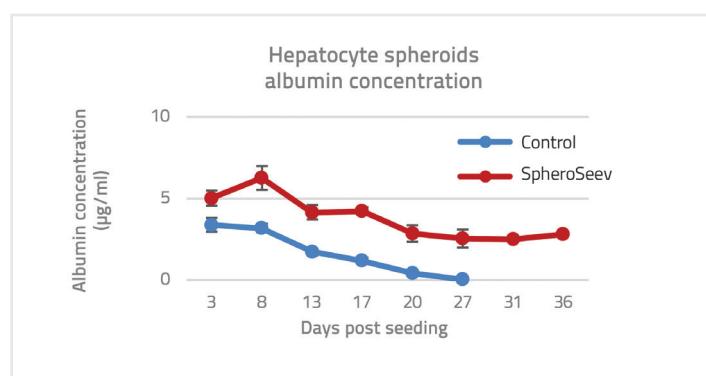
Adipose-derived mesenchymal stem cells (MSCs) cultured as spheroids with SpheroSeev demonstrate tissue-like spread morphology and higher viability than spheroids cultured without SpheroSeev. Green - viable cells. Red - dead cells.



SpheroSeev increases rat hepatocytes spheroids longevity compared with non-SpheroSeev spheroids, which disintegrate after ~20 days.



Higher proliferation/viability of MSCs cultured with SpheroSeev, as determined by cellular ATP concentrations.



Hepatocytes grown in spheroids with SpheroSeev demonstrated improved albumin secretion.