

## 1. Product: SPL3D™ Spheroid Forming Unit (#911604)

SPL Life Sciences has released a new 3D product line, Spheroid Forming Unit (SFU). SFU is designed to facilitate the generation of spheroids and size-up of the generated spheroids. The SFU cap is a ventilating cap with a hydrophobic filter membrane, making it easier to supply the required gas during cell culture.



## 2. Experiment Protocol

- 1) Cells at various proportions were mixed and suspended in DMEM; 50- $\mu$ l droplets with a density of  $10^4$  cells/ $\mu$ l were used.
- 2) The droplets were deposited on the inverted lid of a culture dish after which the lid was placed onto the PBS-filled dish
- 3) The cells were incubated at 37 °C for 48 h.
- 4) Cell aggregates were transferred to the SFU and incubated in a rotary incubator at 37 °C for 72 h.

## 3. Results

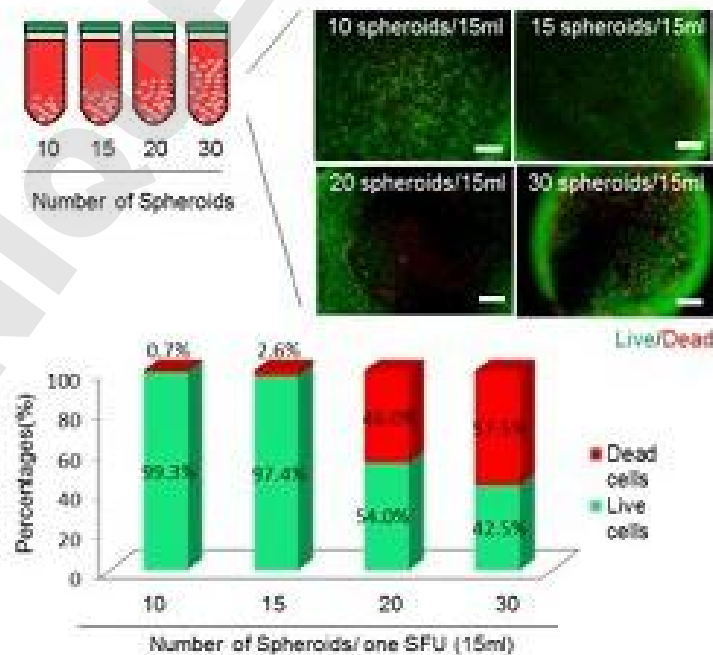
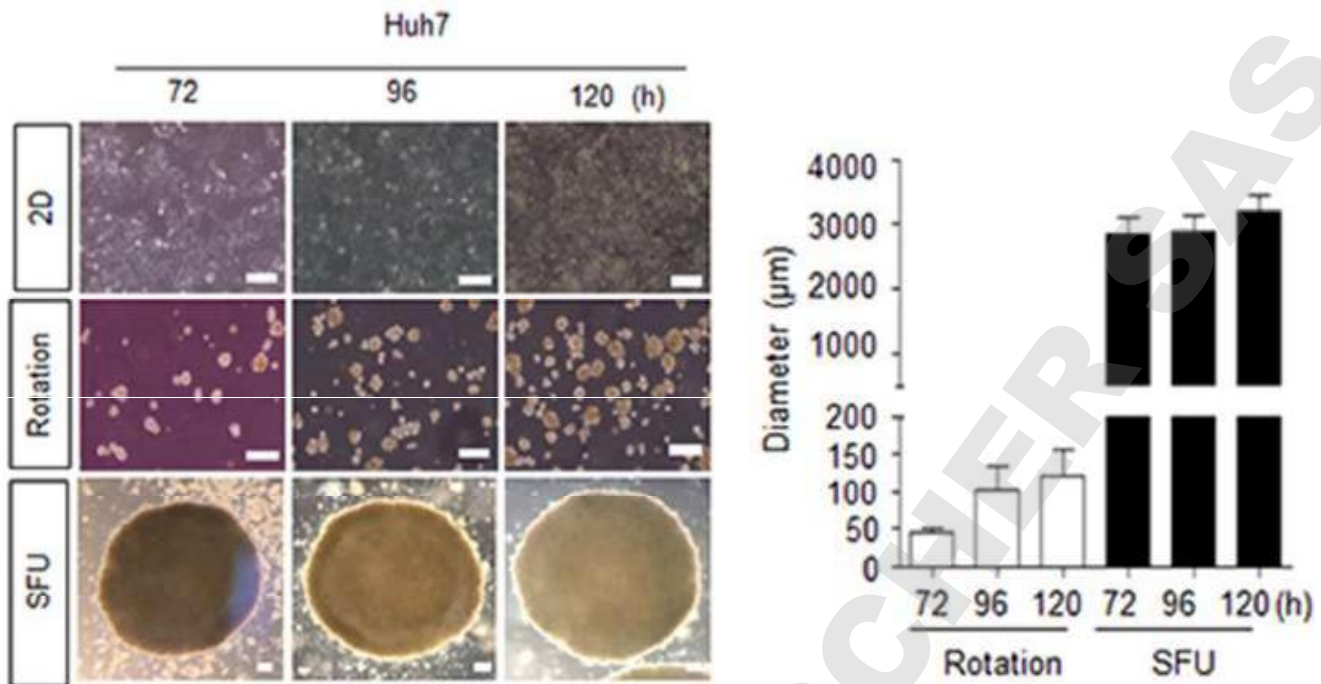


Figure 1. Live/dead stained image of spheroids incubated in 10, 15, 20, and 30 drops per 15 ml of medium. Green and red colours represent living and dead cells, respectively



**Figure 2. Representative DIC images of time-course analysis of cells generated by 2D plate culture, rotary culture, and the SFU. Scale bars, 200 µm. Diameters of cell spheroids generated by rotary culture and the SFU for 72, 96, and 120 h**

#### 4. Conclusion

The numbers of 10-15 spheroids per SFU were shown to be optimal to obtain healthy spheroids through the live/dead staining assay. SFU-based spheroids that had a diameter of ~3mm, were larger than rotary culture-based spheroids.

#### 5. References

Cell Spheroids with Enhanced Aggressiveness to Mimic Human Liver Cancer *In Vitro and In Vivo*, Scientific Reports(2017), Jung *et al.*

#### 6. Ordering Information

Cat.No	Material (tube/cap/filter/mesh)	External Dimension(mm)	Total vol. (ml)	Pore size (µm)	Sterile	Packaging
911604	PP/HDPE/PTFE/PET	17 x 120	15	65	+	3/90

[www.spllifesciences.com](http://www.spllifesciences.com)

For technical assistance, contact SPL R&D Center at:

Tel: +82-31-533-4800; Fax: +82-31-533-1430; e-mail: [spl@ispl.co.kr](mailto:spl@ispl.co.kr)

To place an order, contact your local distributor or

Tel: +82-31-533-4800; Fax: +82-31-533-1430; e-mail: [business@ispl.co.kr](mailto:business@ispl.co.kr)