



TissueSpec® Intestine ECM Hydrogel

Catalog # MTSIN101

TissueSpec® Intestine ECM Hydrogel supports *in vitro* development of human and mouse intestinal organoids.

Human intestinal organoids in TissueSpec® Intestine ECM Hydrogel

iPSC-derived human intestine organoids (iHIOs) were embedded in TissueSpec® Intestine ECM Hydrogel as spheroids. During expansion, iHIOs changed shape, displayed budding, and formed lumenized structures *in vitro* (Figure 1, 2).

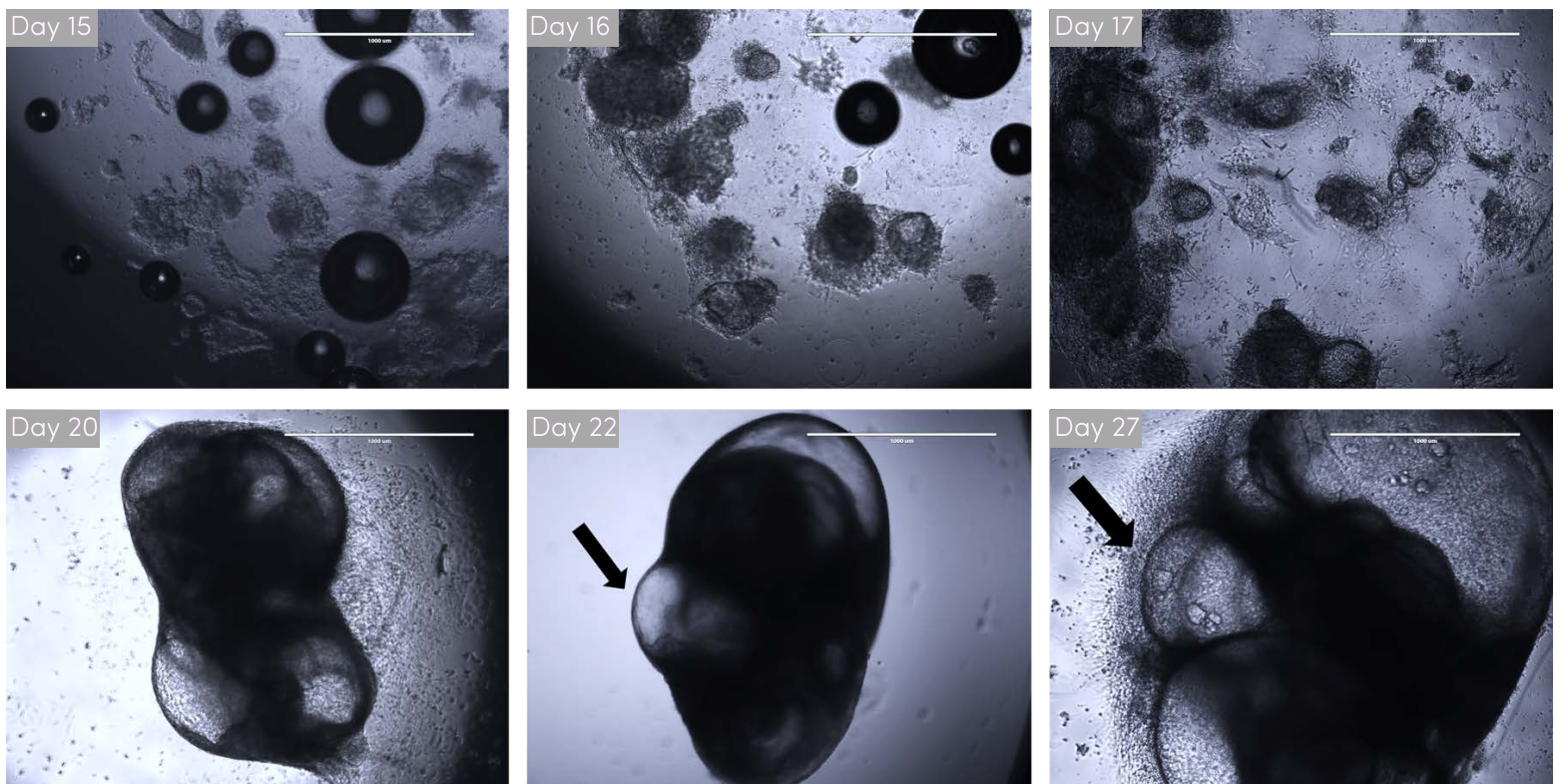


Figure 1 | *In vitro* culture of human intestine organoids in TissueSpec® Intestine ECM Hydrogel.

Light microscopy of 3D culture of iPSC-derived iHIOs in TissueSpec® Intestine ECM Hydrogel. Arrows indicate regions of spheroid outgrowth at day 22 and day 27. Scale bar: 1 mm.

Images courtesy of Dr. Chandan Guha, Department of Radiation Oncology, Albert Einstein College of Medicine

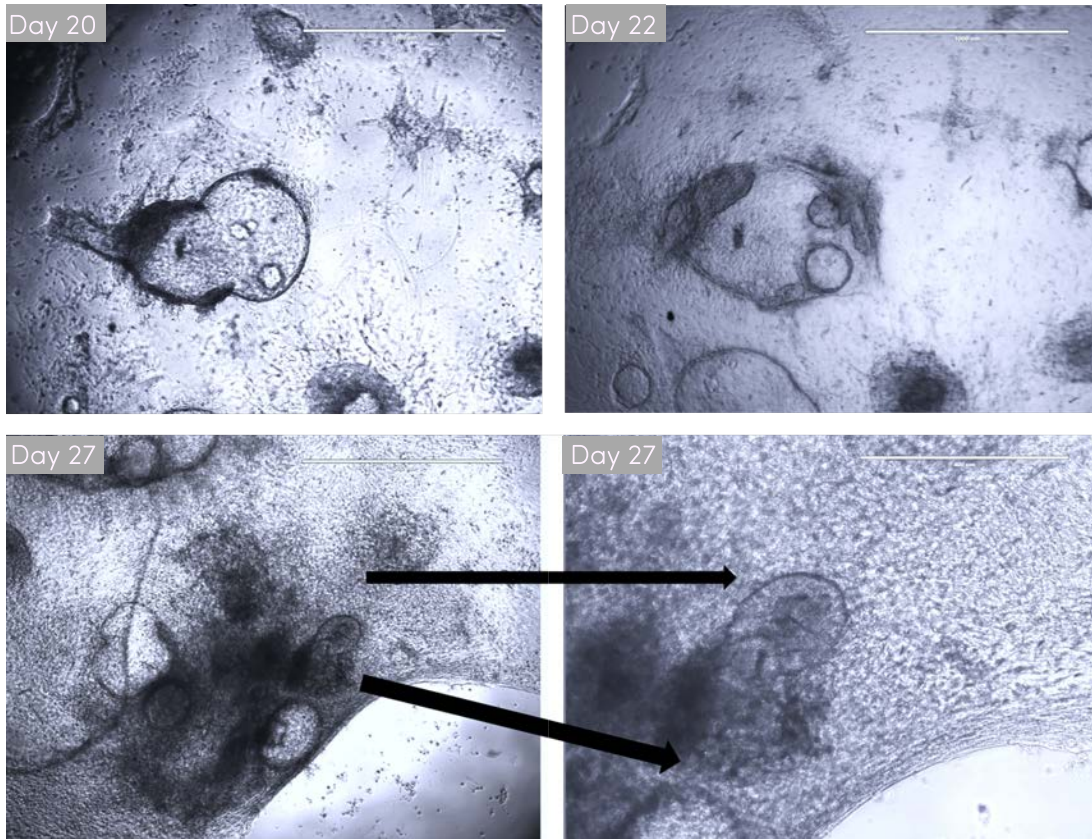


Figure 2 | In vitro culture of human intestine organoids in TissueSpec® Intestine ECM Hydrogel.

iPSC-derived iHIOs were encapsulated in TissueSpec® Intestine ECM Hydrogel and cultured for 27 days. Scale bar: 1 mm.

Images courtesy of Dr. Chandan Guha, Department of Radiation Oncology, Albert Einstein College of Medicine



Mouse intestinal crypts cultured in TissueSpec® Intestine ECM Hydrogel

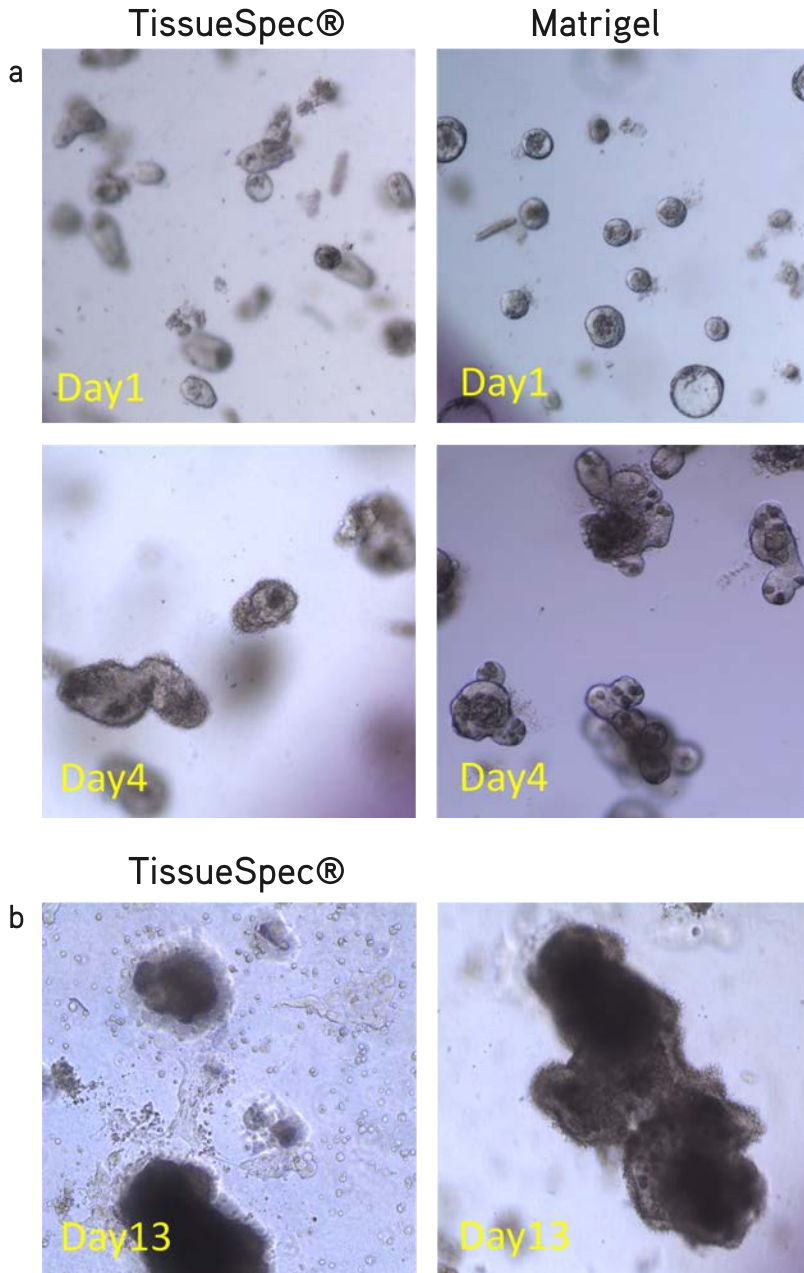


Figure 3 | In vitro culture of mouse intestinal crypts in TissueSpec® Intestine ECM Hydrogel.

(a) Morphologic comparison of mouse intestinal crypts in TissueSpec® Intestine ECM Hydrogel and Matrigel. When encapsulated in TissueSpec® Intestine ECM Hydrogel, mouse intestinal crypts exhibit a more in vivo-like morphology compared to crypts cultured in Matrigel.

(b) Mouse intestinal crypts were cultured for 13 days in TissueSpec® Intestine ECM Hydrogel and formed organoids.