

Supplementary Information for

Decellularized Lung Extracellular Matrix Scaffold Promotes Human Embryonic Stem Cell Differentiation towards Alveolar Progenitors

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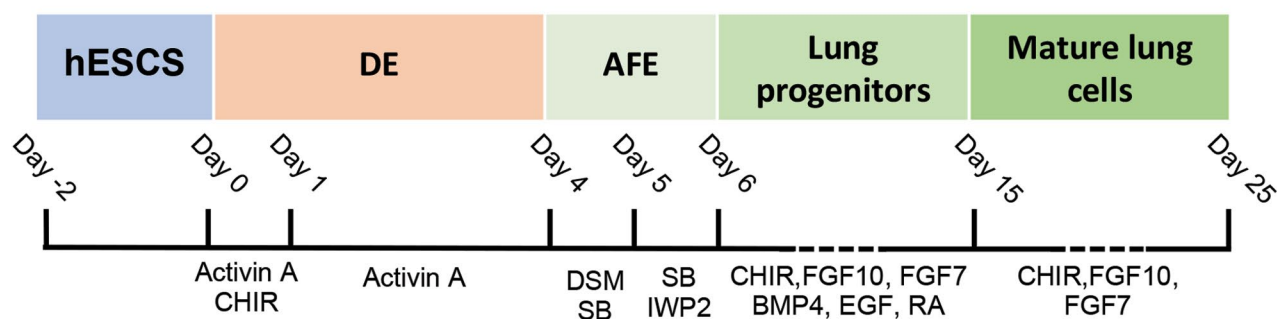


Fig.S1: The day-dependent addition of all the small molecules and growth factors used in the differentiation protocol. hESCs; Human embryonic stem cells, DE; Definitive endoderm, and AFE; Anterior foregut endoderm.

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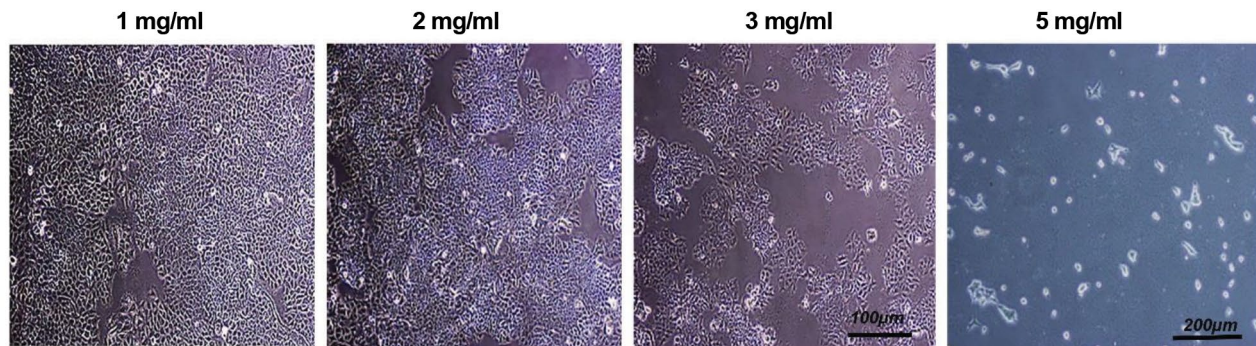


Fig.S2: Culture of A549 cell line on lung extracellular matrix (ECM)-derived hydrogel at concentrations of 1, 2, 3 and 5 mg/ml. Phase contrast images were taken after 6 days.

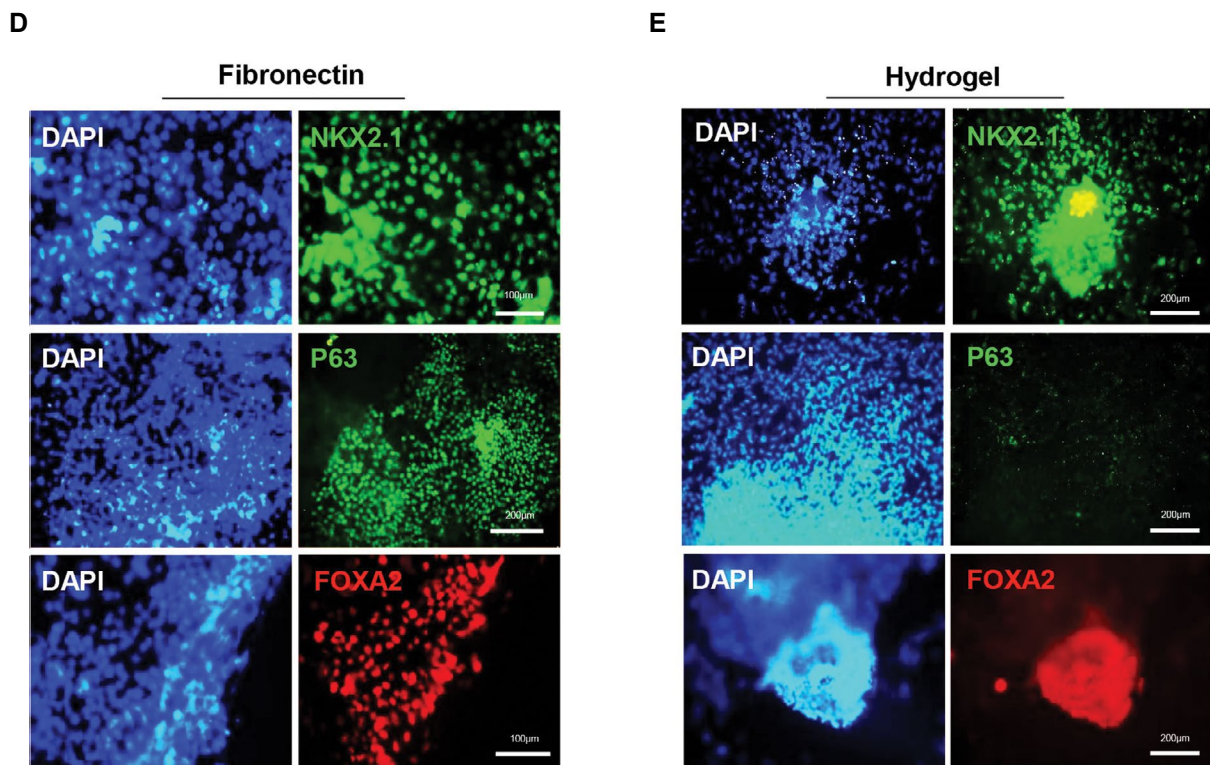
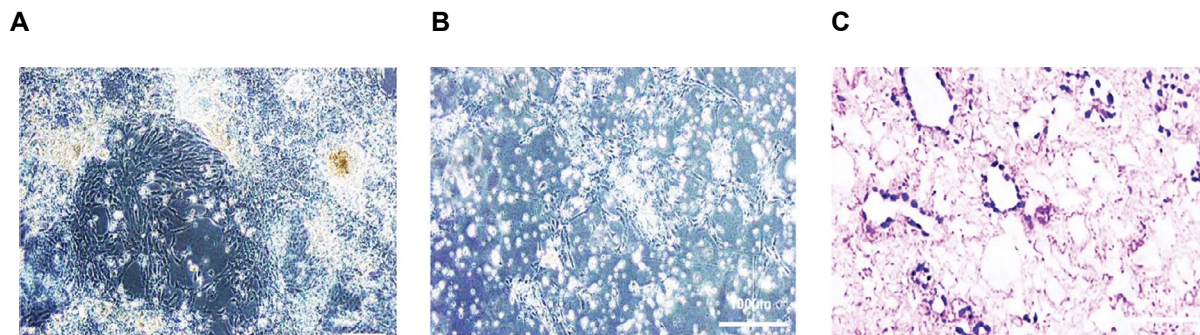


Fig.S3: Morphology and phenotypically characterization of human pluripotent stem cell (hPSC)-derived lung progenitor cells on fibronectin and hydrogel coating plates at day 15 of differentiation. Phase-contrast images of heterogeneous population of differentiated cells on **A.** Fibronectin and **B.** Hydrogel. **C.** H&E staining of scaffold after recellurization with endoderm cells at day 15 indicates that alveolar structures have been lined with epithelial cells. **D.** immunostaining of cells for NKX2-1, P63, and FOXA2 markers on fibronectin and **E.** On ECM lung hydrogel.

Table S1: Real time polymerase chain reaction (RT-PCR) primers

TaqMan primers	Primer sequence (5'-3')
<i>GAPDH</i>	F: GACAACAGCCTCAAGATCATCAG R: ATGGCATGGACTGTGGTCATGAG
<i>NKX2</i>	F: GCATGAACATGAGCGGCAT R: CGACAGGTA CTCTGTTGCTTG
<i>SOX2</i>	F: CCCAGCAGACTTCACATGT R: CCTCCCATTTCCCTCGTTTT
<i>MUC5A</i>	F: ATTGCTATTATGCCCTGTGTA R: TGGTGGACGGACAGTCACT
<i>FOXJ1</i>	F: GCATAAGCGCAAACAGCCG R: TCGAAGATGGCCTCCCAGT
<i>SOX9</i>	F: GAGGAAGTCGGTGAAGAACG R: GTTTTGGGGGTGGTGGGT
<i>SFTPC</i>	F: CCTTCTTATCGTGGTGGTGGTGGT R: TCTCCGTGTGTTTCTGGCTCATGT