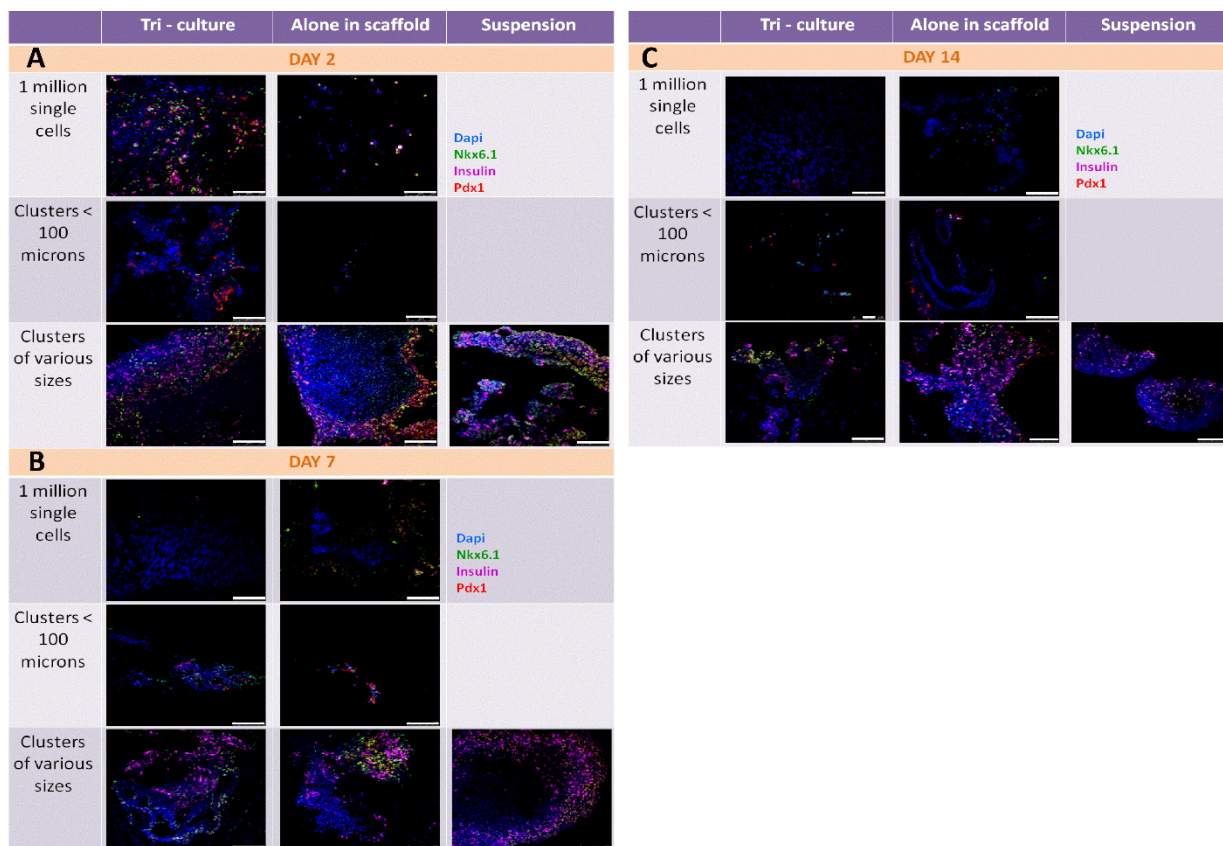
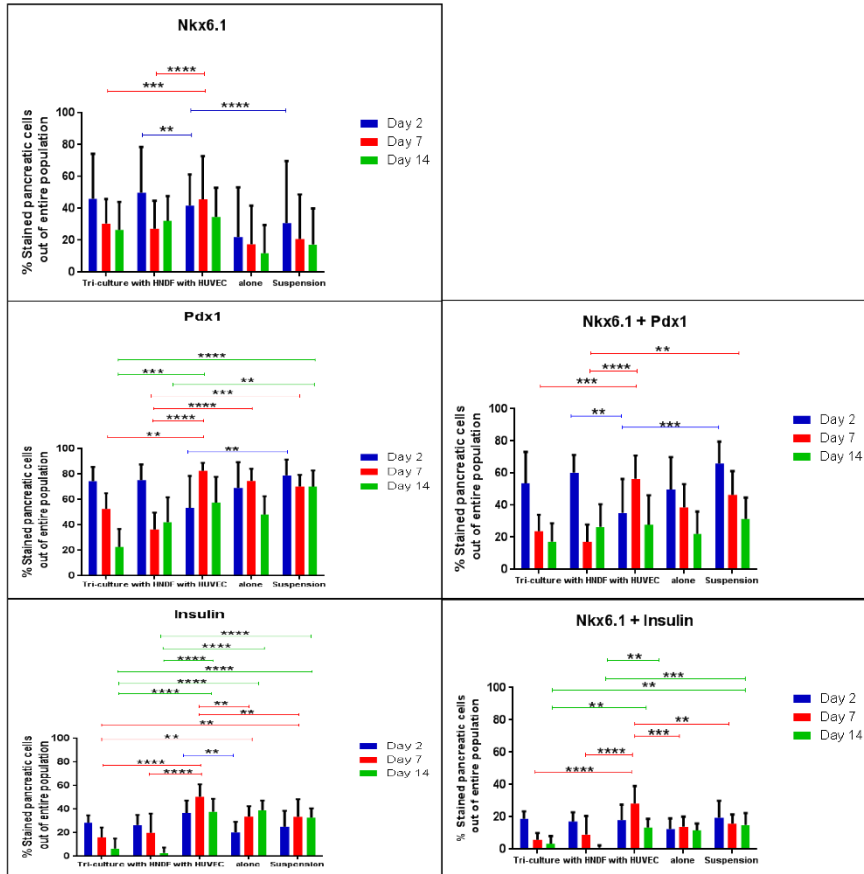


Supplementary 1: Vessel network formation in various cell concentrations and fibrin densities. **A:** Examples of confocal images of co-culture in PLLA/PLGA + fibrin constructs composed of three combinations of fibrinogen densities and cell concentrations (top four rows). Images taken in four time points: days 3, 7, 10 and 14 (scale bars=200µm). Fib 60/30/15= fibrinogen 60/30/15 mg/ml. Con 1/2/3 = 300k/100k/30k HUVEC-GFP with 60k/20k/6k HNDF respectively. Bottom row – maturity level (as scored for each time point according to **B**²⁰) of the combinations above vs. time, displaying the process of vessel network formation in each combination. **C:** Maturity levels of all possible combinations of cell concentrations and fibrin densities. Two pairs of curves are coinciding: Fib30, con1+ Fib15, con1 and Fib60, con3+ Fib15, con3. Optimal network maturation is obtained for Fib30, con1 and Fib15, con1.



Supplementary 2: Pancreatic marker expression in different configurations of hESC-derived pancreatic cells in various culture conditions. Confocal images of immunofluorescence stained cryo-sections of three configurations of hESC-derived pancreatic cells (single-cells, clusters under 100µm, unfiltered clusters in various sizes) in three culture conditions (tri-cultured with HUVEC and HNDF, alone on a scaffold and in suspension). Only clusters in larger scales survived in suspension. Samples were stained for Dapi (nuclear staining - blue), Nkx6.1 (green), Insulin (magenta) and Pdx1 (red) at three time points: (A) day 2, (B) day 7 and (C) day 14. Scale bars=100 µm



Supplementary 3: Complete statistical analysis of Fig 2D-E. All significant statistical information regarding the bar charts of Fig 2 displaying marker expression in all groups researched. ** - $p < 0.001$; *** - $p < 0.0001$; **** - $p < 0.00001$.