

Construction of designed nano-scale cellular environments by coating multilayer nanofilm on the surface of human induced pluripotent stem cell

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Supplementary Figures

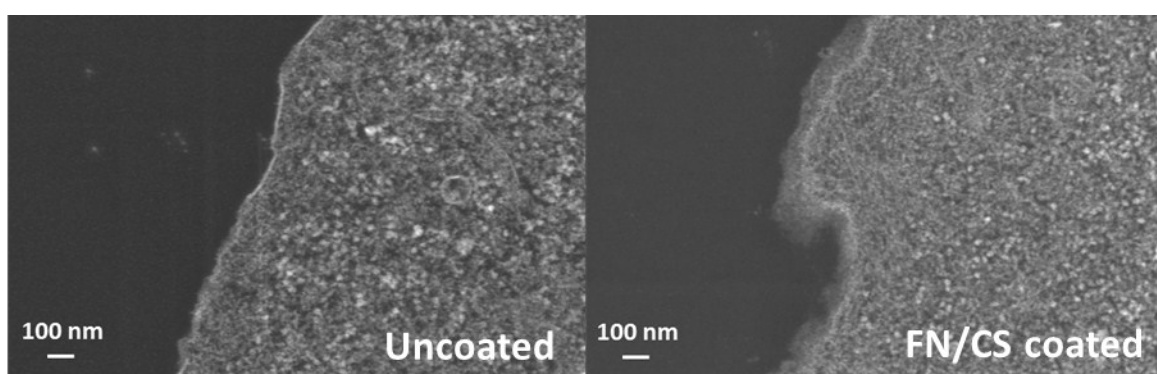


Figure S1. Scanning TEM images of uncoated iPSC and coated with 2 bilayers FN/CS nanofilm.

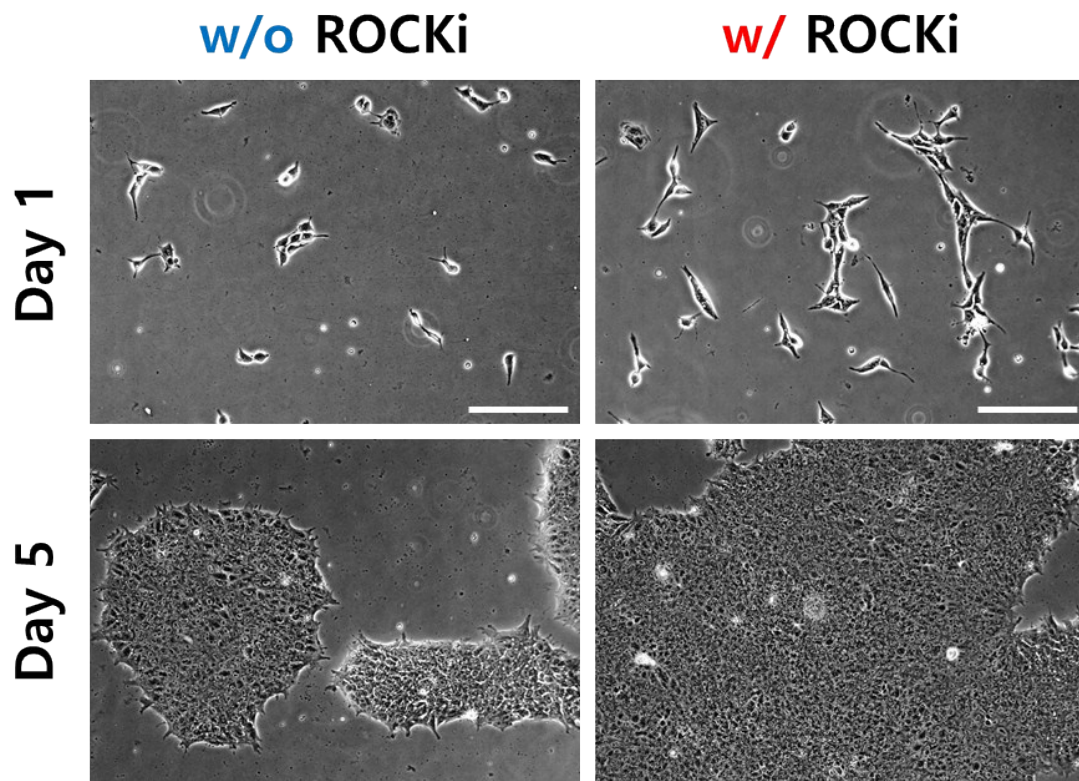


Figure S2. Population of iPSCs undergone mock process for 4-bilayers nanofilm coating (non-coated) in the absence or presence of ROCKi, Y-27632 at day 1 and day 5 of culture on Matrigel-coated well plates. Scale bars = 100 μm .

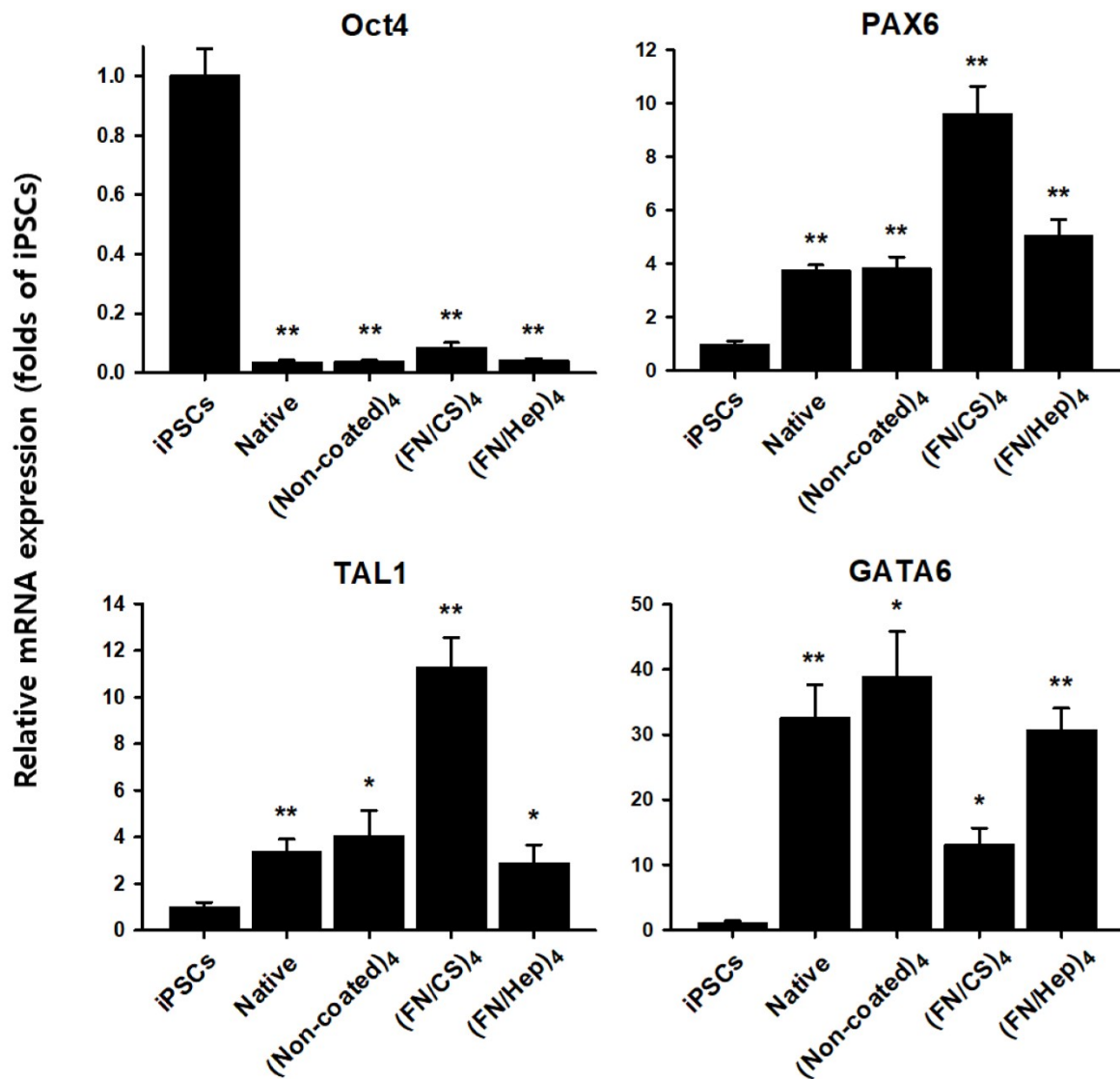


Figure S3. Quantitative real-time PCR analysis of spontaneous differentiation using pluripotency (Oct4) and the three germ layers [ectoderm (PAX6), mesoderm (TAL1), and endoderm (GATA6)] in differentiated cells cultured adherently for 9 days following 5 days of suspension culture of iPSCs. Statistical significance ($*P < 0.05$ and $**P < 0.01$ compared to iPSC group) was determined by Student's t-test. Error bars indicate standard deviations of triplicate experiments.

	Gene	Primer	Sequence (5'-3')
Pluripotency markers	Nanog	Sense	CAA AGG CAA ACA ACC CAC TT
		Antisense	ATT GTT CCA GGT CTG GTT GC
	Oct4	Sense	GAA GGA TGT GGT CCG AGT GT
		Antisense	GTG AAG TGA GGG CTC CCA TA
Ectoderm markers	ZIC1	Sense	AGC GAC AAG CCC TATCTT TG
		Antisense	CGT GGA CCT TCA TGT GTT TG
	PAX6	Sense	GCC AGC AAC ACA CCT AGT CA
		Antisense	TGT GAG GGC TGT GTC TGT TC
Mesoderm markers	TAL1	Sense	AAG TTG TGC GGC GTA TCTTC
		Antisense	TCT TGC TGA GCT TCT TGT CC
	IGF2	Sense	CAG ACC CCC AAA TTATCG TG
		Antisense	GCC AAG AAG GTG AGA AGC AC
Endoderm markers	SOX17	Sense	CAT GAC TCC GGT GTG AAT CTC
		Antisense	CAG TAA TAT ACC GCG GAG CTG
	HGF	Sense	GCA TCA AAT GTC AGC CCT GG
		Antisense	CAA CGC TGA CAT GGA ATTCC
	GATA6	Sense	CCA TGA CTC CAA CTT CCA CC
		Antisense	ACG GAG GAC GTG ACT TCG GC
GAPDH	Sense	GTC AGT GGT GGA CCT GAC CT	
	Antisense	TGC TGT AGC CAA ATT CGT TG	

Table S1. List of primers for PCR analysis