

Engineering vascular tissue with functional smooth muscle cells derived from human iPSC cells and nanofibrous scaffolds

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Supplementary Materials

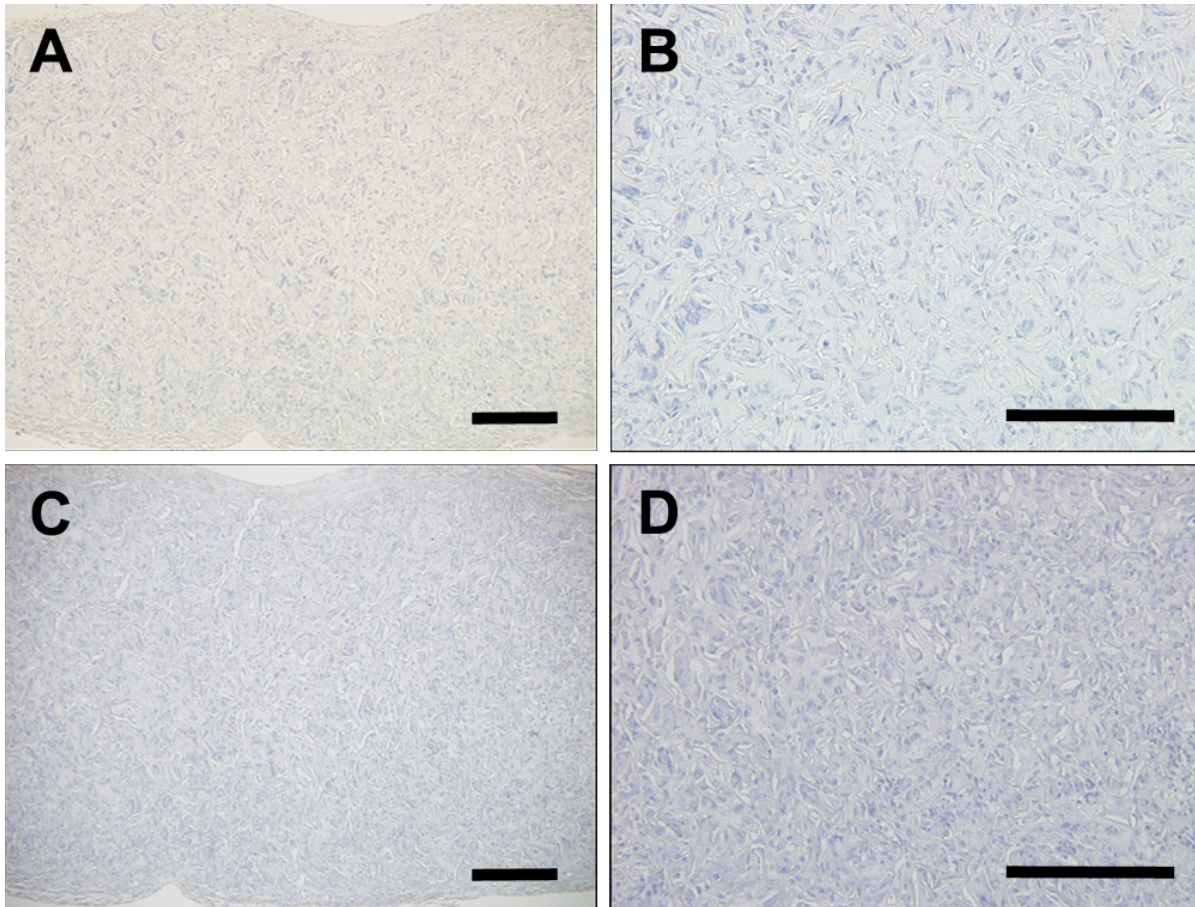


Fig. S1 Negative control of immunohistochemical staining for (A, B) SM22 α and (C, D) CNN1 and α -SMA.

List of Supplementary Movies

Movie S1 Contractile response of primary aortic SMCs.

Movie S2 Contractile response of human iPSC line 1-derived SMCs.

Movie S3 Contractile response of human iPSC line 2-derived SMCs.

Supplementary Tables

Table S1. Primary and secondary antibodies used for immunofluorescence staining, immunohistochemistry and flow cytometry analysis

Antibodies	Source	Dilution	Manufacturer	Cat. NO.
OCT4	Rabbit IgG	1:100	Stemgent	09-0023
SOX2	Rabbit IgG	1:100	Stemgent	09-0024
NANOG	Rabbit IgG	1:100	Stemgent	09-0020
TRA-1-60	Mouse IgM	1:100	Stemgent	09-0010
TRA-1-81	Mouse IgM	1:100	Stemgent	09-0011
SSEA3	Rat IgM	1:100	Developmental Studies Hybridoma Bank	MC-631
SSEA4	Mouse IgG3	1:100	Developmental Studies Hybridoma Bank	MC-813-70
α -SMA	Mouse IgG2a	1:500	Sigma	A5228
SM22 α	Rabbit IgG	1:500	Abcam	ab14106
CNN1	Mouse IgG1	1:500	Sigma	C2687
TUJ1	Mouse IgG2a	1:500	Covance	MMS-435P
α -1-fetoprotein	Rabbit IgG	1:400	Dakocytomation	A0008
FITC α -SMA	Mouse IgG2a	1:50	Sigma	F3777
Alexa 594 Goat Anti-Mouse IgG	Goat IgG	1:1000	Life Technologies	A11005
Alexa 488 Goat Anti-Rabbit IgG	Goat IgG	1:1000	Life Technologies	A-11008
Alexa 594 Goat Anti-Rat IgG	Goat IgG	1:1000	Life Technologies	A-11007
APC Anti-Mouse IgG1	Rat IgG	1:100	eBioscience	17-4015
FITC Mouse IgG2a Isotype	Mouse IgG2a	1:50	eBioscience	8011-4724

Table S2. Primers used for qRT-PCR

Genes		Sequences (5'→3')
α -SMA	Forward	CACTGTCAGGAATCCTGTGA
	Reverse	CAAAGCCGGCCTTACAGA
SM22 α	Forward	TCTTTGAAGGCAAAGACATGG
	Reverse	TTATGCTCCTGCGCTTTCTT
CNN1	Forward	GTCCACCCTCCTGGCTTT
	Reverse	AAACTTGTTGGTGCCCATCT
GAPDH	Forward	AAGGTGAAGGTCGGAGTCAAC
	Reverse	GGGGTCATTGATGGCAACAATA

Table S3. Primers used for RT-PCR

Genes		Sequences (5'→3')	Expected band size (bp)
OCT4	Forward	CTGCAGTGTGGGTTTCGGGCA	169
	Reverse	CTTGCTGCAGAAGTGGGTGGAGGA	
NANOG	Forward	TAGCAATGGTGTGACGCAGA	615
	Reverse	CCTCGCTGATTAGGCTCCAA	
SOX2	Forward	ATGCACCGCTACGACG	437
	Reverse	CTTTTGCACCCCTCCCATTT	
GAPDH	Forward	GTGGACCTGACCTGCCGTCT	152
	Reverse	GGAGGAGTGGGTGTCGCTGT	