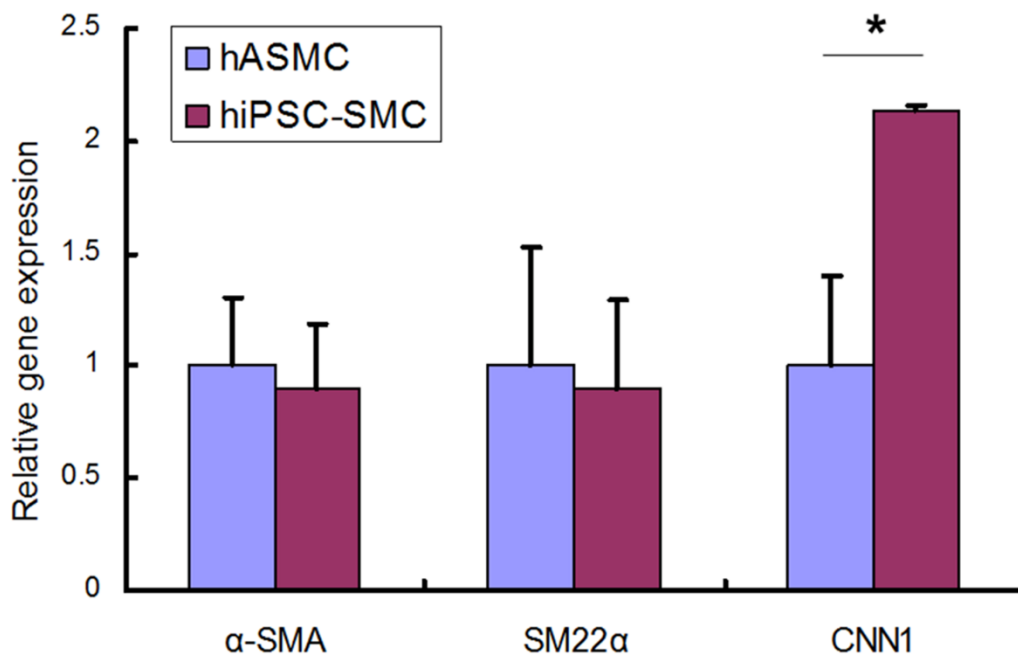


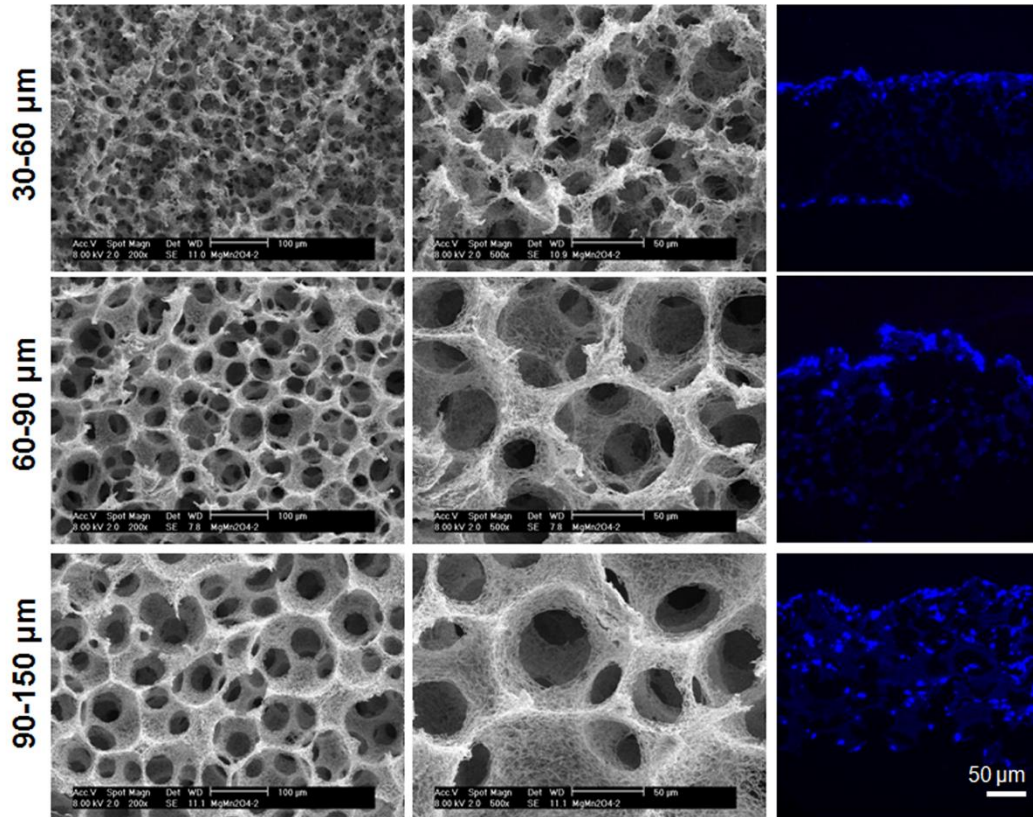
Supplementary Information

Regenerating patient-specific vascular tissue with macroporous nanofibrous scaffolds and induced pluripotent stem cells-derived cardiovascular progenitor cells

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Supplementary Fig. S1. Characterization of smooth muscle cell marker gene expression of hiPSC-derived vascular smooth muscle cells (hiPSC-VSMCs). The gene expression levels were compared with primary aortic smooth muscle cells (hASMCs). Data shown are presented as mean \pm SEM ($n = 3$). *, $P < 0.05$ vs hASMCs.



Supplementary Fig. S2. Cell seeding and infiltration into macroporous nanofibrous scaffolds with different pore size. Primary human aortic smooth muscle cells were seeded and the cell-scaffold constructs were cross-sectioned and stained with 4',6-diamidino-2-phenylindole (DAPI) after 24 hr of seeding and culture. Left panel and middle panel: scanning electron microscopic observation of the scaffolds at low and high magnification respectively. Right panel: nuclei staining with DAPI showing the cell infiltration into the scaffolds. Scale bar = 50 μm .

Table S1. Primary antibodies used for immunofluorescence staining

Antibodies	Source	Dilution	Manufacturer	Cat. No.
OCT4	Rabbit IgG	1:100	Stemgent	09-0023
NANOG	Rabbit IgG	1:100	Stemgent	09-0020
SOX2	Rabbit IgG	1:100	Stemgent	09-0024
TRA-1-81	Mouse IgM	1:100	Stemgent	09-0011
TRA-1-60	Mouse IgM	1:100	Stemgent	09-0010
SSEA3	Rat IgM	1:100	Developmental Studies Hybridoma Bank	MC-631
SSEA4	Mouse IgG3	1:100	Developmental Studies Hybridoma Bank	MC-813-70
ISL-1	Mouse IgG2a	1:100	Developmental Studies Hybridoma Bank	39.4D5
MESP1	Rabbit IgG	1:100	Aviva Systems Biology	ARP39374_P050
α -SMA	Mouse IgG2a	1:500	Sigma	A5228
SM22 α	Rabbit IgG	1:500	Abcam	ab14106
CNN1	Mouse IgG1	1:500	Sigma	C2687

Table S2. Primers used for qRT-PCR

Genes		Sequence
OCT4	Forward	AGTGCCCGAAACCCACACTG
	Reverse	ACCACACTCGGACCACATCCT
Brachyury	Forward	CAGTGGCAGTCTCAGGTTAAGAAGGA
	Reverse	CGCTACTGCAGGTGTGAGCAA
SOX17	Forward	GTGGACCGCACGGAATTTG
	Reverse	GGAGATTCACACCGGAGTCA
PAX6	Forward	AACAGACACAGCCCTCACAAACA
	Reverse	CGGGAAGTTGAACTGGAAGTAC
ISL1	Forward	ATCAGGTTGTACGGGATCAAATG
	Reverse	ATGTGATACACCTTGGAGCG
MESP1	Forward	GCTTCCCTCTTTCCATCCAGGA
	Reverse	CCCTGAAAGACATCACTTGGAA
NKX2-5	Forward	CAAGTGTGCGTCTGCCTTT
	Reverse	CAGCTCTTTCTTTTCGGCTCTA
PDGFRA	Forward	TGGCAGTACCCCATGTCTGAA
	Reverse	CCAAGACCGTCACAAAAAGGC
α -SMA	Forward	CACTGTCAGGAATCCTGTGA
	Reverse	CAAAGCCGGCCTTACAGA
SM22 α	Forward	TCTTTGAAGGCAAAGACATGG
	Reverse	TTATGCTCCTGCGCTTTCTT
CNN1	Forward	GTCCACCCTCCTGGCTTT
	Reverse	AAACTTGTTGGTGCCCATCT
Col1A1	Forward	GCCTCAAGGTATTGCTGGAC
	Reverse	ACCTTGTTTGCCAGGTTTAC
Col3A1	Forward	CTGGACCCAGGGTCTTC
	Reverse	CATCTGATCCAGGGTTTCCA
GAPDH	Forward	AAGGTGAAGGTCGGAGTCAAC
	Reverse	GGGGTCATTGATGGCAACAATA