

Supplementary Materials

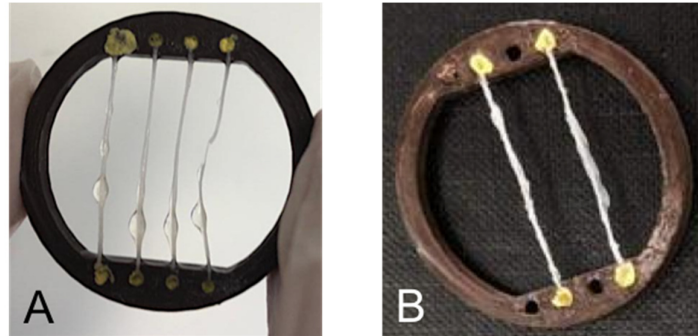


Figure S1. Collagen coating optimization. To obtain a uniform layer of collagen around the yarns, different formulations were tested. (A) Human collagen (Sigma-Aldrich, USA) + 10 U human transglutaminase (Zedira GmbH, Germany); (B) Bovine collagen (PureCol EZ Gel solution, 5074, Sigma-Aldrich, USA) + 10 U transglutaminase (Zedira GmbH, Germany). Yarns were coated with 100 μ L of the collagen solutions and then incubated for 1 h at 37 °C under humidified conditions to allow gelation of the solution.

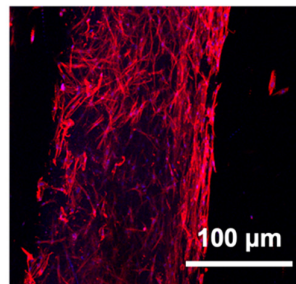


Figure S2. hASCs encapsulated in collagen-coated yarns after 3 days of culture. Cells were stained with Phalloidin-Rhodamine (cytoskeleton, red) and DAPI (nuclei, blue).

Table S1. Primer sequences used for RT-qPCR analysis.

Gene	Primer Sequence	Accession Number
Housekeeping Genes		
<i>GAPDH</i>	F: TGCACCACCAACTGCTTAGC R: GGCATGGACTGTGGTCATGAG	NM_33197
<i>GUSB</i>	F: GATGTAGGTGGTGGGTGTCTG R: GCTCCGAATCACTATCGCCA	NM_000181.4
Tenogenic-related Genes		
<i>MKX</i>	F: TCGCACAGACACTCTGGAAAA R: TGTTAAGGCCATAGCTGCGT	NM_173576.2
<i>SCX</i>	F: AGAACACCCAGCCCAAACAGAT R: TCGCGGTCCTTGCTCAACTTT	NM_001080514.2
<i>TNMD</i>	F: CCGCGTCTGTGAACCTTTAC R: CACCCACCAGTTACAAGGCA	NM_022144.2
ECM-related Genes		
<i>COL1A1</i>	F: GCCAAGACGAAGACATCCCA R: GGCAGTTCCTGGTCTCGTCA	NM_000088.4
<i>COL3A1</i>	F: TTGGCATGGTTCTGGCTTCC R: GCTGGCTACTTCTCGTG	NM_000090.3
<i>DCN</i>	F: CAGCATTCCCTCAAGGTCTTCCT R: GAGAGCCATTGTCAACAGCA	NM_001920.3
<i>MMP1</i>	F: ACCTGGAAAAATACTACAACCTGAA R: TTCAATCCTGTACAGATGTGTT	NM_002421.3
<i>MMP3</i>	F: CACTCACAGACCTGACTCGG R: AGTCAGGGGGAGGTCCATAG	NM_002422.4
<i>TNC</i>	F: ACTGCCAAGTTCACAACAGACC R: CCCACAATGACTTCCTTGACTG	NM_002160.3
Phenotypic Drift-related Genes		
<i>ACTA2</i>	F: TAAGACGGGAATCCTGTGAAGC R: TGTCCCATTCCCACCATCAC	NM_001141945.1
<i>RUNX2</i>	F: TTCCAGACCAGCAGCACTC R: CAGCGTCAACACCATCATTC	NM_001024630
<i>SOX9</i>	F: TTCATGAAGATGACCGACGC R: GTCCAGTCGTAGCCCTTGAG	NM_000346.3