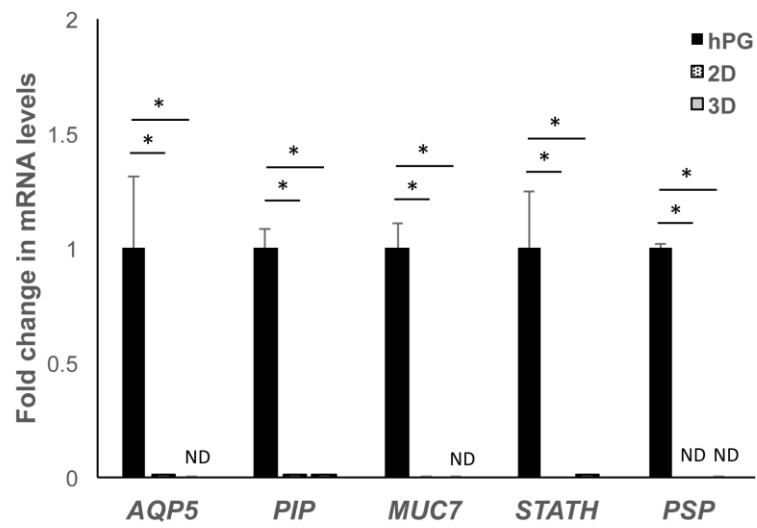


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**Figure S1.** Levels of acinar differentiation markers are significantly lower among hS/PCs grown in 2D and 3D HA hydrogels compared to the native hPG tissue.

## Supplemental Tables

**Table S1.** A list of primer sequences used in this study. Primers for *BHLHA15* were obtained commercially (Qiagen, NM\_177455).

**Table S1**

Genes	Sense	Antisense
<i>GAPDH</i>	CAGCCTCAAGATCATCAGCA	TGTGGTCATGAGTCCTTCCA
<i>RPS29</i>	CAATATGTGCCGCCAGTGT	GAAGGAAGAGCATTTAGTCCAACT
<i>K5</i>	CGTGCCGCAGTTCTATATTCT	ACTTTGGGTTCTCGTGTCAG
<i>K14</i>	CACAGATCCCACTGGAAGAT	GATAATGAAGCTGTATTGATTGCC
<i>MYC</i>	CGGAACTCTTGTGCGTAAGG	TCATAGGTGATTGCTCAGGACAT
<i>ETV4</i>	CAGACGGACTTCGCCTAC	GGAATGGTCGCAGAGGTT
<i>ETV5</i>	GTGATACTGACAGGTAAGCAACA	AGAGCAGGCAGCAAGGTA
<i>KIT</i>	GTCTCCACCATCCATCCA	TCCATTATTCTGCTTATTCTCA
<i>AMY1A</i>	CTCGGCACAGTTATTCGCAAGTGG	ACAGCCTAGCATCCCAGAAGGT
<i>K19</i>	CTGCCTCCAAGGTCCTCT	CCCATCCCTCTACCCAGAAG
<i>TFCP2L1</i>	GCCGCCTGCTTCCTGTTC	CTGCCCACCACTGCTCAAAG
<i>PSP</i>	TCTGAAGAGGACGAATGAGGAGGA	AGGCTTTCACGCTGGTTAGGT
<i>STATH</i>	AAGAGAACCCAGCCAACATGAAG	TGTTGGTATTGTGGTTGGTATGGT
<i>PIP</i>	TCTCTGGGACACATTGCCTTCTG	TGATCTCCGAGTGTTGCCTGAG
<i>AQP5</i>	CTGTCCATTGGCCTGTCTGTC	GGCTCATACGTGCCTTTGATC
<i>MUC7</i>	GCTCCACCAGAGACCACAG	GCTGAGGCCGATGATGGG

**Table S2.** hS/PCs encapsulated in 3D HA hydrogels modified with basement membrane-derived peptides yield higher quality and quantity of mRNA than unmodified HA gels.

**TABLE S2**

Sample #	hS/PCs in Unmodified Gels		hS/PCs in Peptide-Modified Gels	
	mRNA (ng/ $\mu$ l)	260/280	mRNA (ng/ $\mu$ l)	260/280
1	9.4	1.74	25.9	1.72
2	13.1	1.43	31.3	1.78
3	4.8	1.47	23.7	1.71
Average	9.1	1.55	26.97	1.74

**Table S3.** A list of primary antibodies used in this study.

**TABLE S3**

<b>Target protein</b>	<b>Vendor</b>	<b>Item #</b>	<b>Host Species</b>	<b>Dilution</b>
<b>Cytokeratin 5 (K5)</b>	Biolegend	PRB160-P	Rabbit	1:1000
<b>Cytokeratin 14 (K14)</b>	Abcam	Ab49747	Mouse	1:100
<b>KIT</b>	Santa Cruz Biotechnology	SC1491	Goat	1:10
<b>Ki67</b>	BD Pharmingen	550609	Mouse	1:50
<b>MIST1</b>	Santa Cruz Biotechnology	SC80984	Mouse	1:50
<b>Amylase</b>	Sigma	A8273	Rabbit	1:100