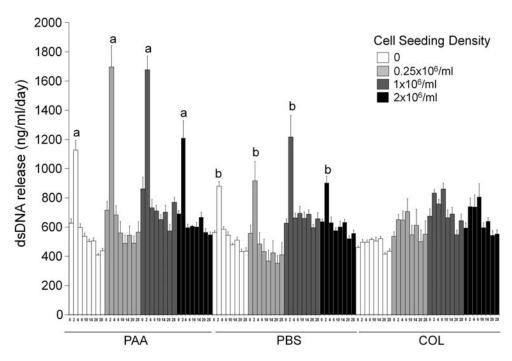
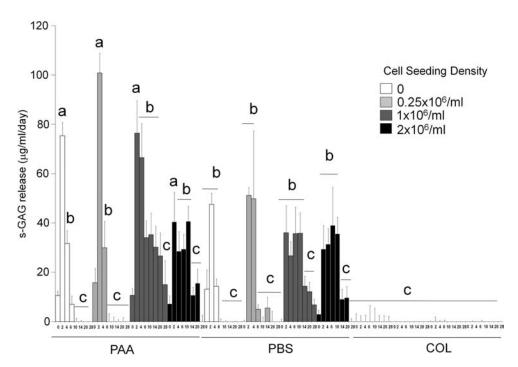


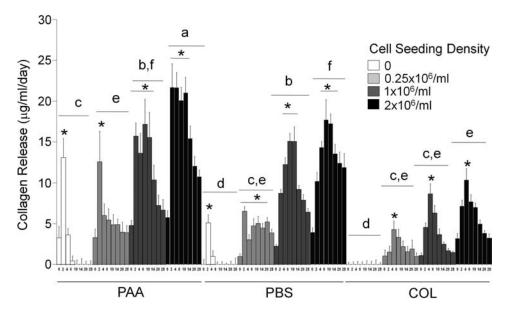
**SUPPLEMENTAL FIG. S1.** Dry weight (g) for constructs prepared with peracetic acid (PAA)-ligament-derived matrix (LDM) (PAA), phosphate-buffered saline (PBS)-LDM (PBS), or collagen gel alone (COL) and seeded with 0,  $0.25 \times 10^6$ ,  $1 \times 10^6$ , or  $2 \times 10^6$  human adipose stem cells (hASCs)/mL and cultured for 0, 7, 14, or 28 days. Dry mass of constructs containing collagen gel alone was significantly less than those containing either PBS- or PAA-LDM. Groups having different letters are significantly different from other groups across all time points ( $p \le 0.05$ ; n = 3 biologic donors, mean  $\pm$  standard error of the mean [SEM]).



**SUPPLEMENTAL FIG. S2.** dsDNA release (ng/mL/day) into the cell culture medium over a 28-day culture period (evaluated at days 0, 2, 4, 6, 10, 14, 20, and 28) for constructs prepared with PAA-LDM (PAA), PBS-LDM (PBS), or collagen gel alone (COL) and seeded with 0,  $0.25 \times 10^6$ ,  $1 \times 10^6$ , or  $2 \times 10^6$  hASCs/mL. dsDNA release into the cell culture medium was increased at day 2 for constructs containing PAA- or PBS-LDM compared to all other time points, and to constructs containing collagen gel alone. Constructs containing PAA-LDM released more dsDNA into the medium than those containing PBS-LDM on day 2 of culture. Time points having different letters are significantly different from other groups and biologically relevant ( $p \le 0.05$ ; n = 3 biologic donors, mean  $\pm$  SEM).



**SUPPLEMENTAL FIG. S3.** Sulfated-glycosaminoglycan (s-GAG) release ( $\mu$ g/mL/day) into the cell culture medium over a 28-day culture period (evaluated at days 0, 2, 4, 6, 10, 14, 20, and 28) for constructs prepared with PAA-LDM (PAA), PBS-LDM (PBS), or collagen gel alone (COL) and seeded with 0,  $0.25 \times 10^6$ ,  $1 \times 10^6$ , or  $2 \times 10^6$  hASCs/mL. Sulfated-glycosaminoglycan release into the culture medium was significantly less from constructs containing collagen gel alone than those containing either PAA- or PBS-LDM. Groups having different letters are significantly different from other groups and biologically relevant ( $p \le 0.05$ ; n = 3 biologic donors, mean  $\pm$  SEM).



**SUPPLEMENTAL FIG. S4.** Collagen release ( $\mu$ g/mL/day) into the cell culture medium over a 28-day culture period (evaluated at days 0, 2, 4, 6, 10, 14, 20, and 28) for constructs prepared with PAA-LDM (PAA), PBS-LDM (PBS), or collagen gel alone (COL) and seeded with 0,  $0.25 \times 10^6$ ,  $1 \times 10^6$ , or  $2 \times 10^6$  hASCs/mL. Collagen release through the culture period from constructs at all seeding densities prepared using collagen gel alone was significantly less than LDM constructs seeded with either  $1 \times 10^6$  or  $2 \times 10^6$  hASCs/mL. Groups having different letters are significantly different from other groups and biologically relevant. \*Significantly different from other time points for similar treatment and seeding density ( $p \le 0.05$ ; n = 3 biologic donors, mean  $\pm$  SEM).