improved the strength measured in circumferential direction but decreased the strength measured in longitudinal direction. * p < 0.05, ** p < 0.01 compared to longitudinal static samples; # p < 0.05, ## p < 0.01 compared to circumferential static samples; & p < 0.05 for comparison made between longitudinal and circumferential samples.

Figure 5. Expression of smooth muscle cell (SMC) specific markers in the vascular grafts. (A) SMC specific genes expression of hMSC construct cultured in complete culture medium; (B) SMC specific genes expression of hMSC construct cultured in smooth muscle cell induction medium; (C) Immunofluorescent staining of SMC specific proteins in hMSC construct cultured in complete culture medium. ** p < 0.01 compared to static culture samples. Scale bar: 20 µm.

Supplementary Figure 1. Immunofluorescence staining of connexin 43 on the cross section of the vascular grafts cultured in complete culture medium. The bioreactor samples had stronger expression of connexin 43 than static samples. Scale bar: 50 µm.



Supplementary Figure 1. Immunofluorescence staining of connexin 43 on the cross section of the vascular grafts cultured in complete culture medium. The bioreactor samples had stronger expression of connexin 43 than static samples. Scale bar: $50 \mu m$.