Supporting Information

Tailoring cell adhesive properties via layer-by-layer assembly of chitosan and alginate

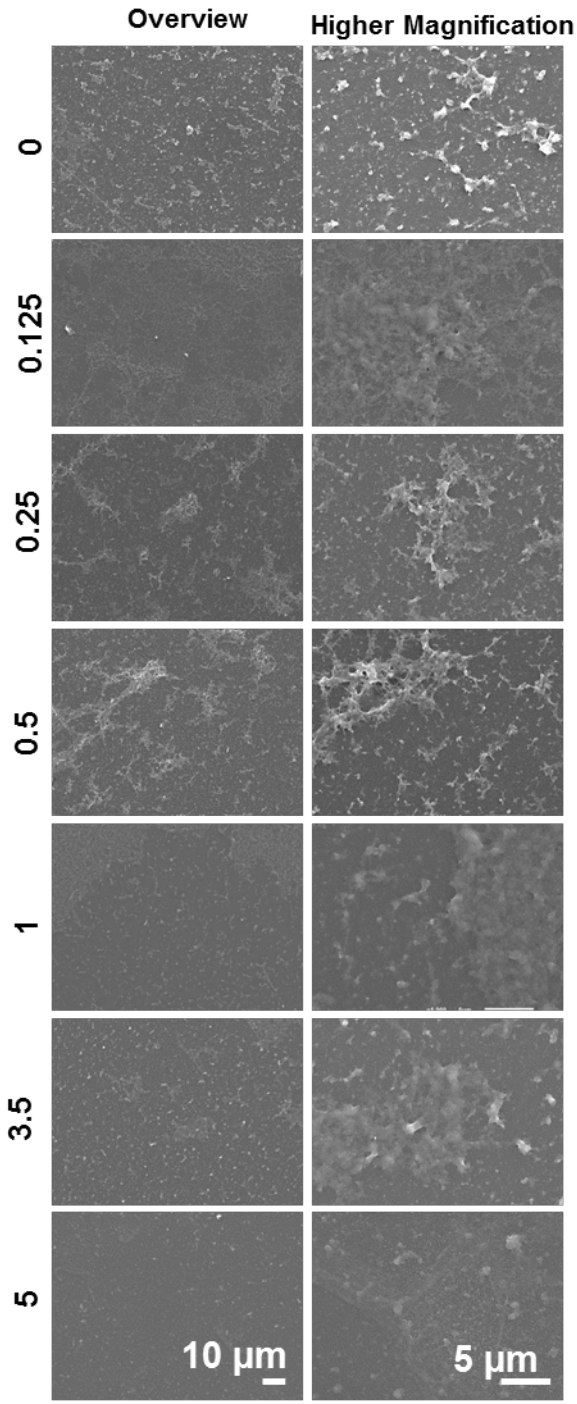

Figure S1. SEM images of $(ALG/CHI)_5$ assembled onto glass and cross-linked at different concentrations of genipin. The scale bar is 10 µm and 5 µm for the overview and higher magnification, respectively.

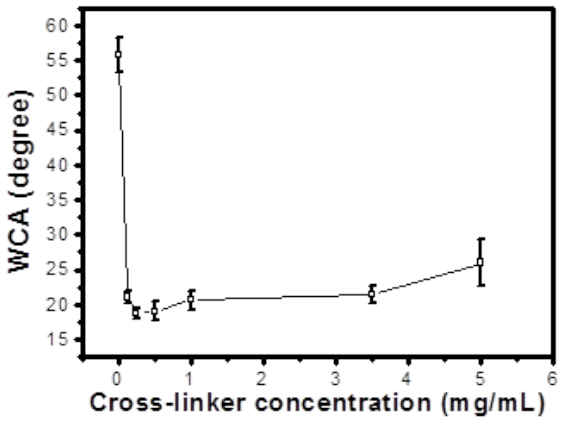

Figure S2. Water contact angle as a function of cross-linker concentration.

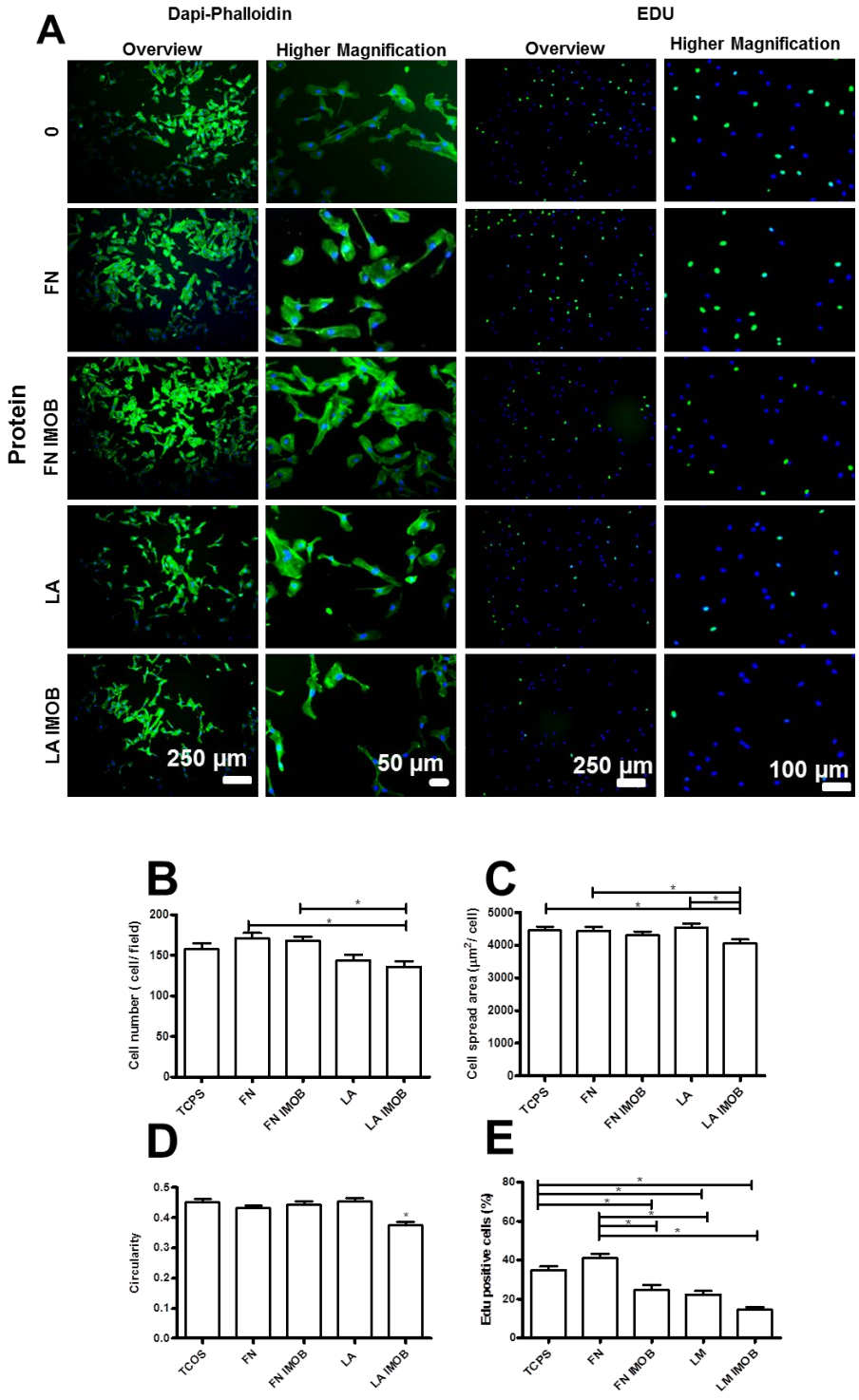

Figure S3. (A) DAPI/Phalloidin staining and representative images of EDU assay for HUVECs adhered on tissue culture plastic (TCPs) with and without adsorbed or immobilized proteins. Quantification of (B) Cell number per field, (C) Cell spread area, and (D) Cell circularity. (E) Percentage of proliferating cells measured by the EDU assay. Statistical analysis was performed, and data was considered statistically different for p values < 0.05 (*). (#) denotes significant differences when compared to all PEMs formulations.

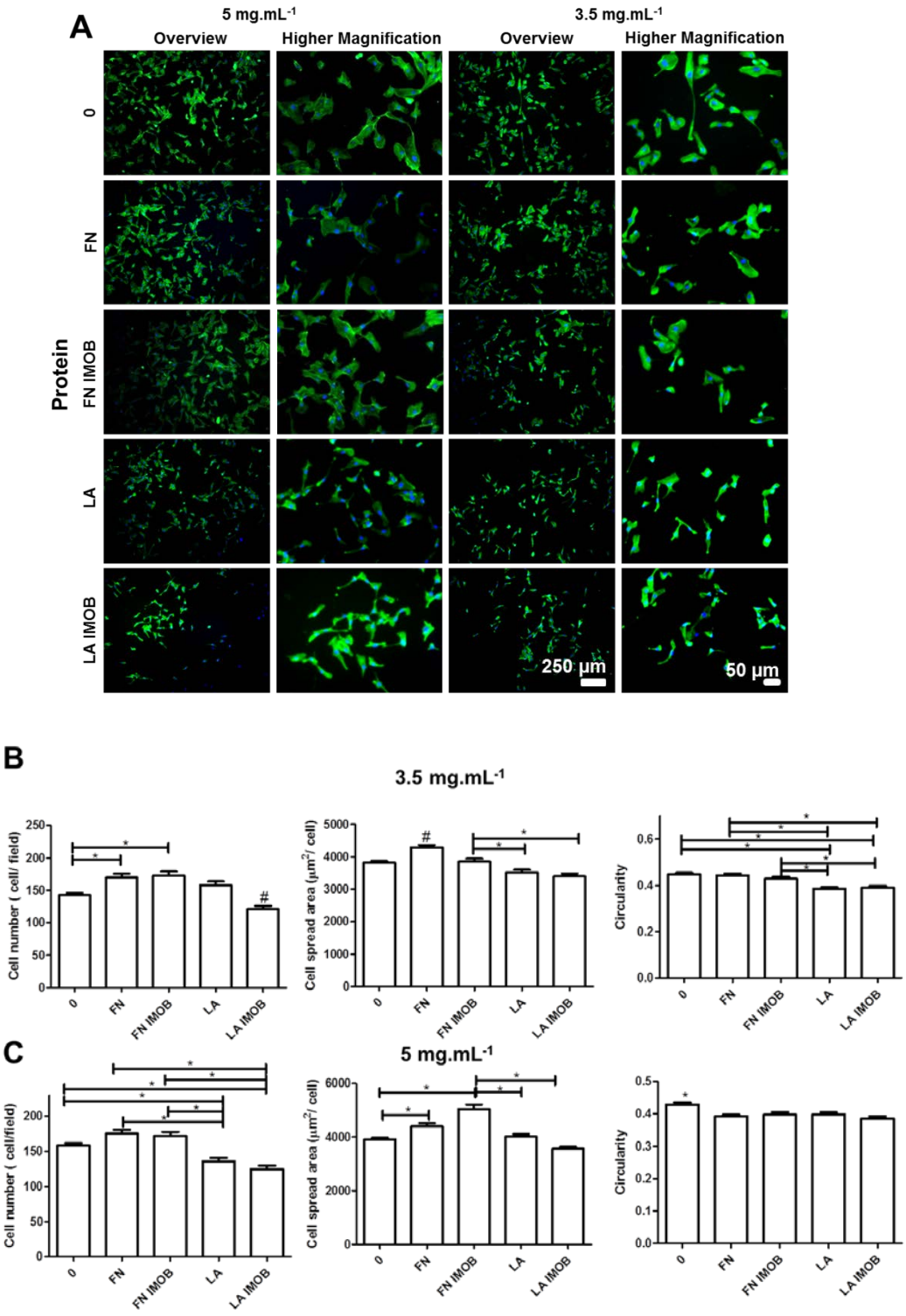

Figure S4. (A) DAPI/Phalloidin staining for HUVECs adhered on crosslinked films (3.5 mg mL^{-1} or 5 mg mL^{-1}) with and without adsorbed or immobilized proteins. Quantification of (B) Cell number per field, (C) Cell spread area, and (D) Cell circularity. Statistical analysis was performed, and data was considered statistically different for p values < 0.05 (*). (#) denotes significant differences when compared to all PEMs formulations.

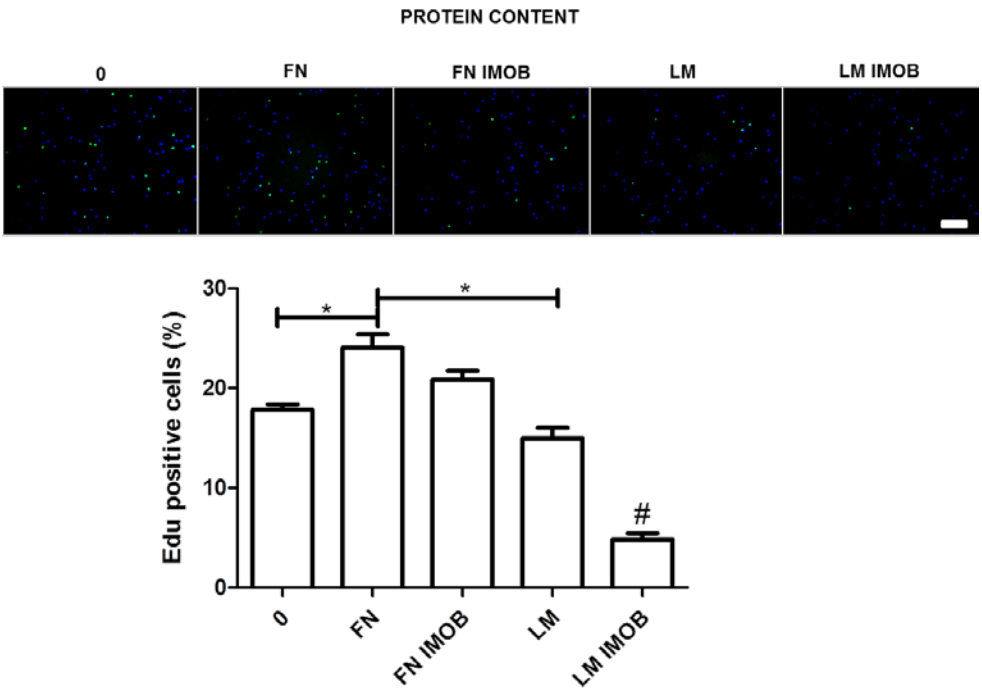

Figure S5. Percentage of proliferating cells measured by the EDU assay. The inset figures are representative images of EDU assay for HUVECs adhered on cross-linked films (3.5 mg mL^{-1}) with and without adsorbed or immobilized proteins. The scale bar represents 250 μm. Statistical analysis was performed, and data was considered statistically different for p values < 0.05 (*). (#) denotes significant differences when compared to all PEMs formulations.

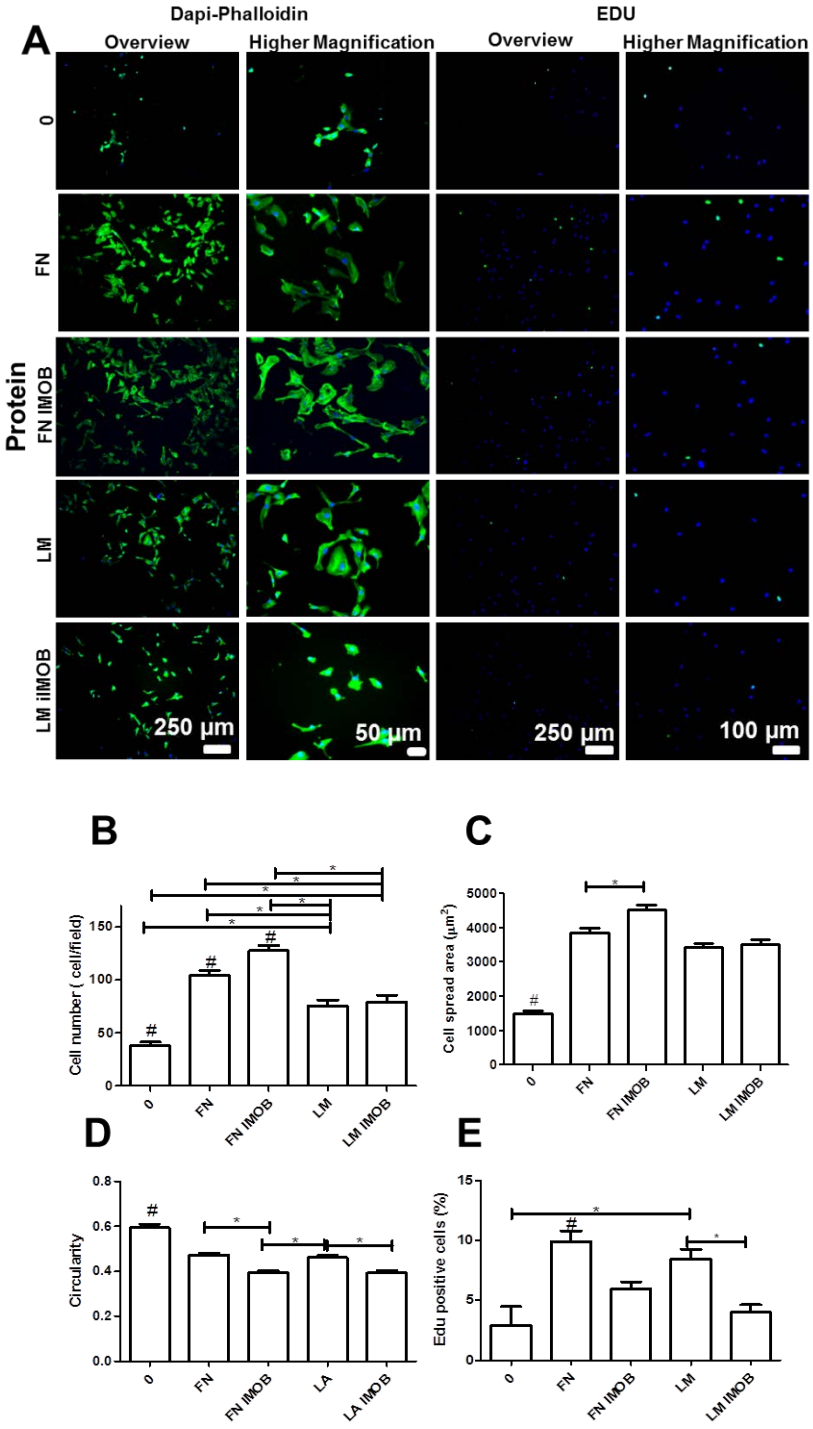

Figure S6. (A) DAPI/Phalloidin staining and representative images of EDU assay for HUVECs adhered on cross-linked films with 2 bilayers of ALG/CHI on the top and in the presence or absence of adsorbed or immobilized proteins is also represented. Quantification of (B) Cell number per field, (C) Cell spread area, and (D) Cell circularity. (E) Percentage of proliferating cells measured by the EDU assay. Statistical analysis was performed, and data was considered statistically different for p values < 0.05 (*). (#) denotes significant differences when compared to all PEMs formulations.

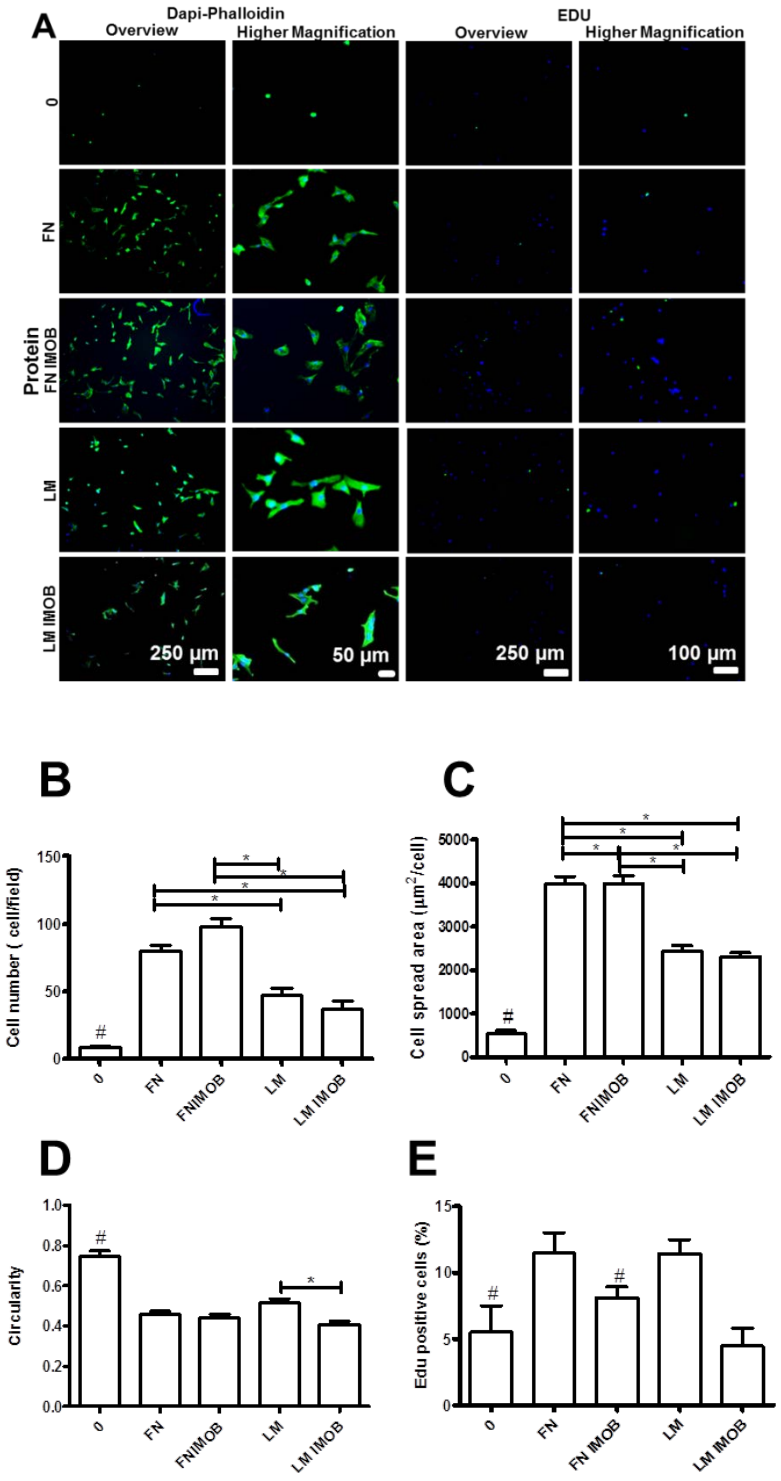

Figure S7. (A) DAPI/Phalloidin staining and representative images of EDU assay for HUVECs adhered on native films with a bilayer of ALG/CHI on the top and in the presence or absence of adsorbed or immobilized proteins is also represented. Quantification of (B) Cell number per field, (C) Cell spread area, and (D) Cell circularity. (E) Percentage of proliferating cells measured by the EDU assay. Statistical analysis was performed, and data was considered statistically different for p values < 0.05 (*). (#) denotes significant differences when compared to all PEMs formulations.

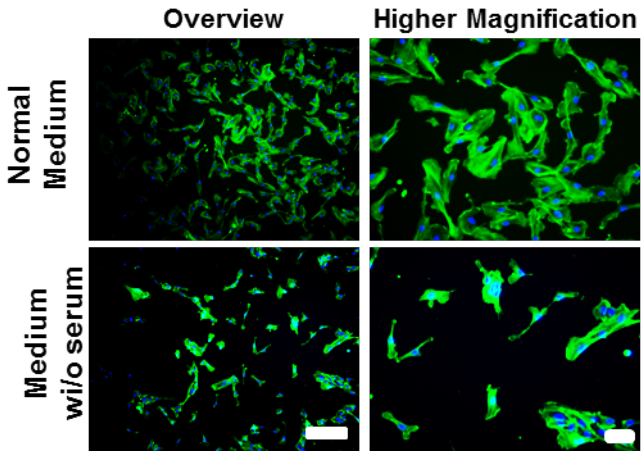

Figure S8. Adhesion of HUVECS on TCPs when resuspended in normal medium or medium without serum. Cells nuclei were stained blue by DAPI and F-actin filaments in green by phalloidin. Scale bars represent 250 μm and 50 μm in lower- and higher-magnification images, respectively.