Supporting Information

"Click" immobilization of a VEGF-mimetic peptide on decellularized endothelial extracellular matrix to enhance angiogenesis

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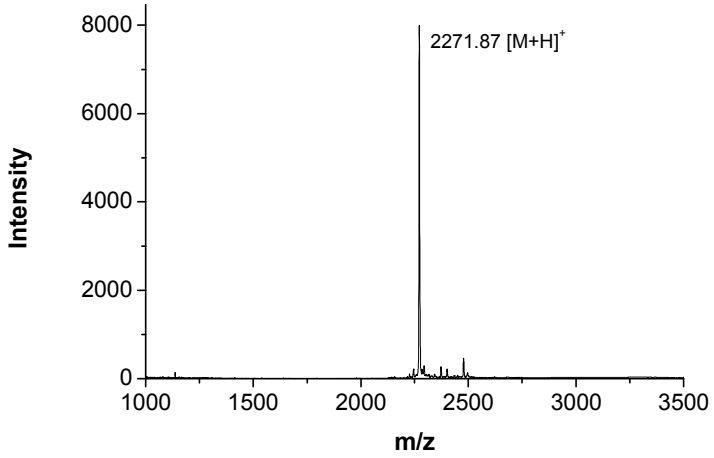

Figure S1. MALDI spectra of **QK-EG$_6$-N$_3$**.

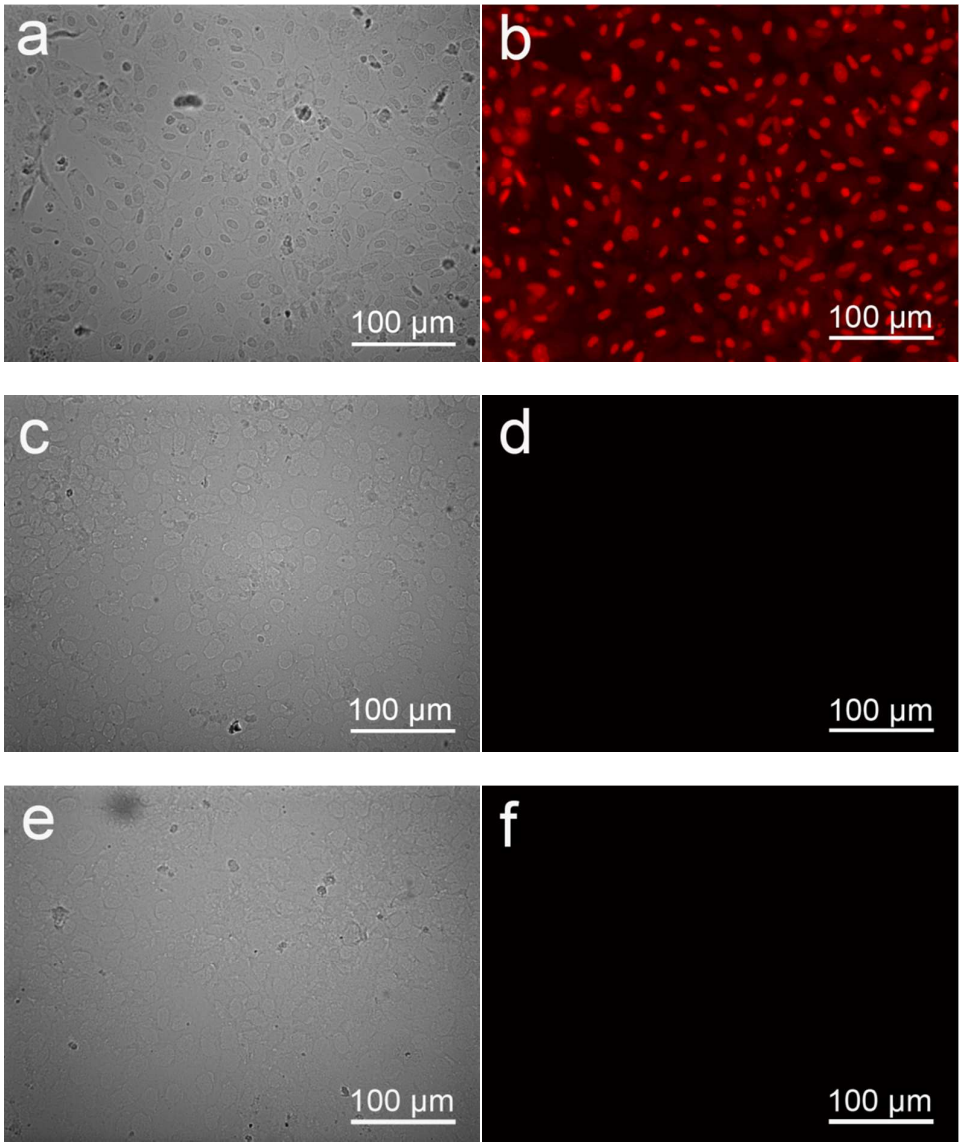

Figure S2. Bright field (left) and fluorescence (right) images of HUVECs before (a, b) and after (c-f) decelluarization. (c, d): after decellularization of HUVECs without HPG incorporation (**DC-ECM**); (e, f): after decellularization of HUVECs with HPG incorporation (**DC-ECM-HPG**). The fluorescence images (b, d, f) were obtained in TRITC channel of the samples stained with PI.

X-ray photoelectron spectroscopy (XPS) measurement of **DC-ECM**

For XPS measurement, a PHI 5700 X-ray photoelectron spectrometer equipped with a monochromatic Al Kα X-ray source (1486.7 eV) at a takeoff angle (TOA) of 45º from the substrate was used. As expected, the ECM surfaces containing proteins displayed a strong N1s signal (Figure S3).

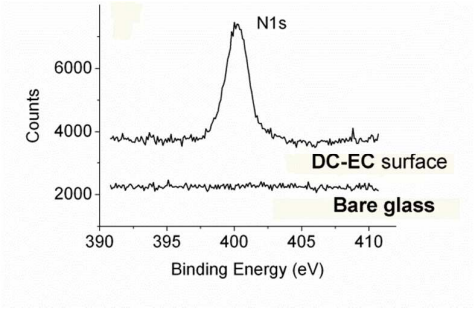

Figure S3. XPS narrow scans of the N1s regions of a **DC-ECM** sample and bare glass.

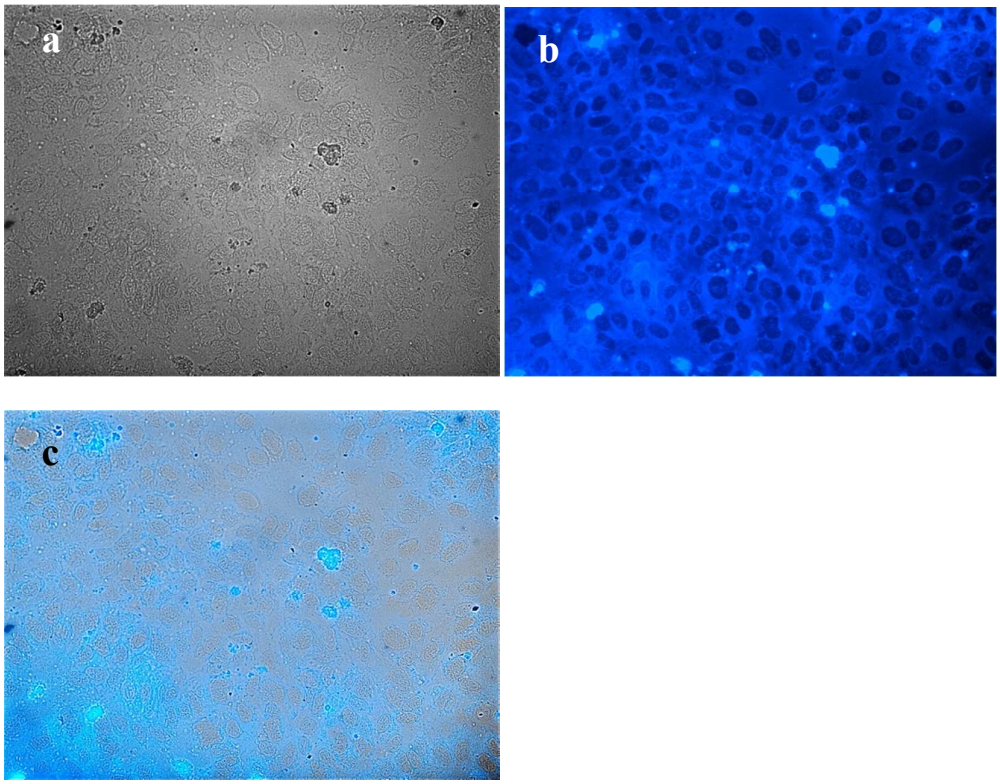

Figure S4. Bright field (a), DAPI fluorescence (b) and overlay (c) images (455 × 133 μm^2) of coumarin-triazole (λ_{em} = 465 nm) in **DC-ECM-HPG** after CuAAC reaction with coumarin-azide **1**.

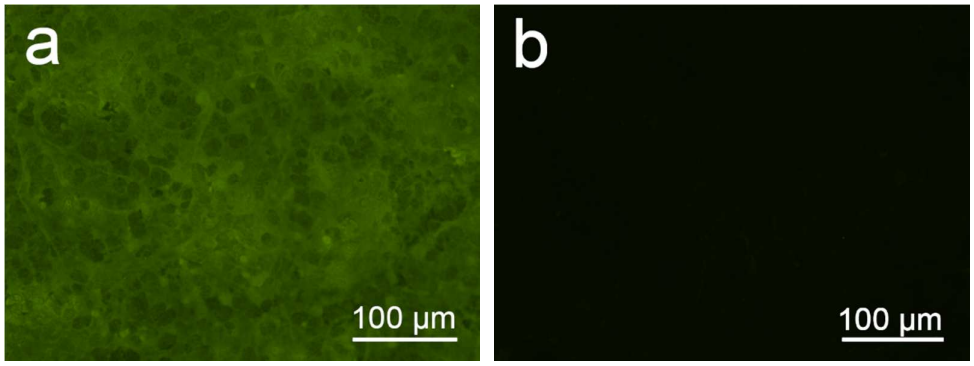

Figure S5. Immunofluorescence image of VEGF on decellularized samples. (a) **DC-ECM-QK** treated first with VEGF polyclonal antibody followed by FITC-labeled goat anti-rabbit IgG antibody. (b) Control samples of **DC-ECM-QK** treated with FITC-labeled goat anti-rabbit IgG antibody only.

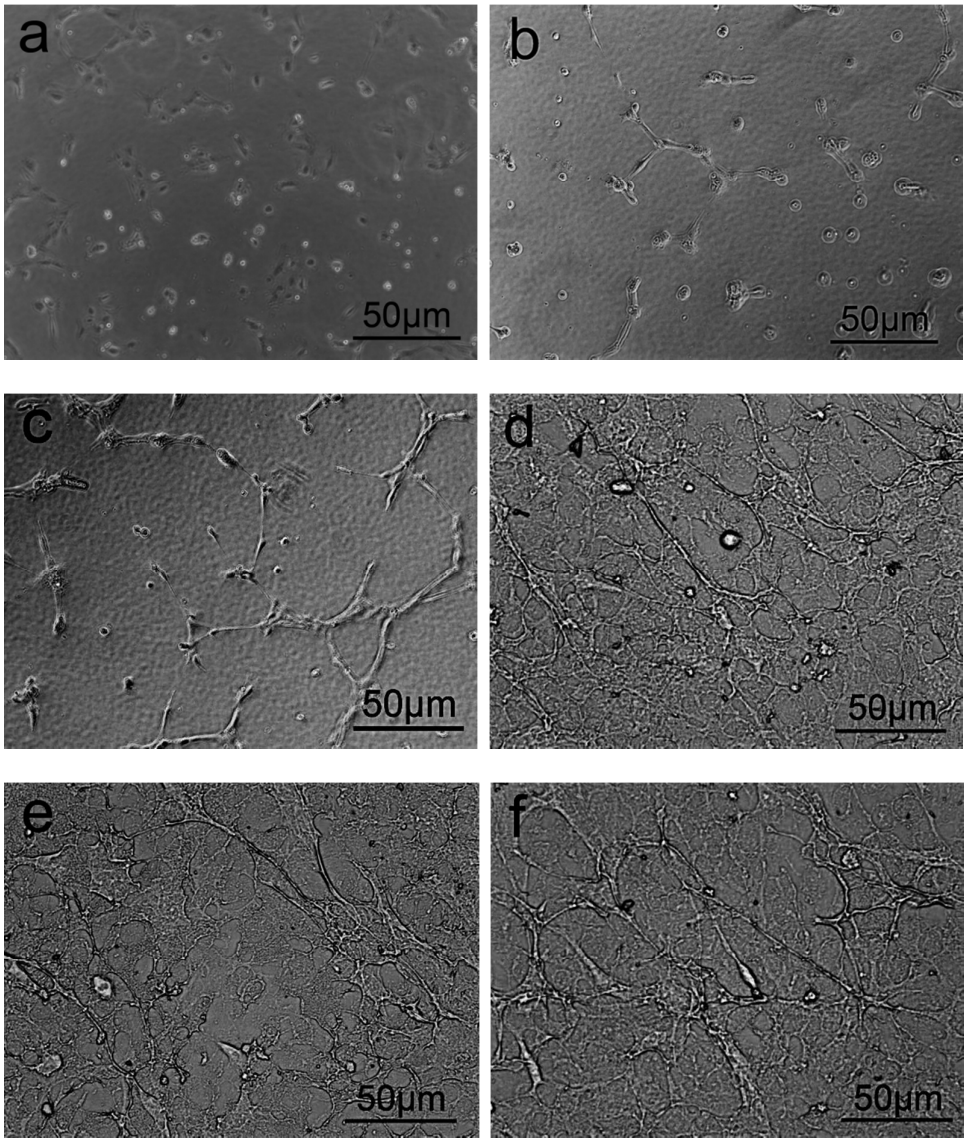

Figure S6. Bright field images of HUVECs on bare glass (a), collagen I (b), Matrigel (c), **DC-ECM** (d), **DC-ECM-Ctrl** (e) and **DC-ECM-QK** (f) at 6 h post seeding.