# High-throughput hyaluronic acid hydrogels array for

cell selective adhesion screening.

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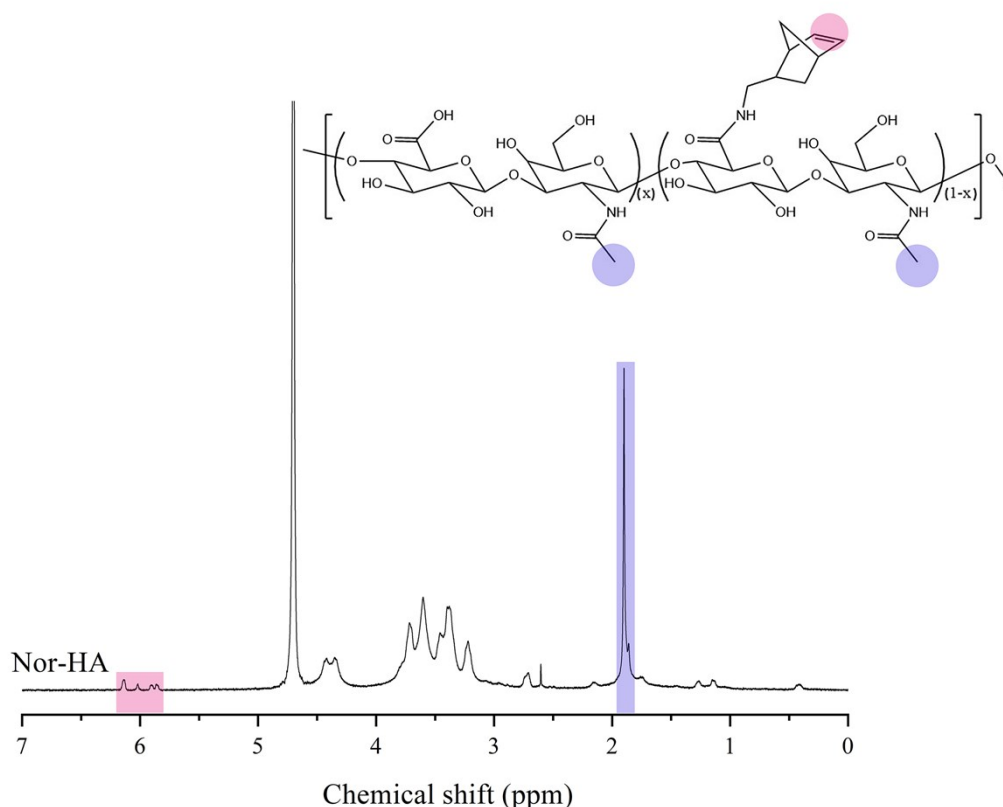
Figure S1. ^{1}H NMR spectra (Bruker, AVANCEⅢ400) of the norbornene modified hyaluronic acid (Nor-HA). Norbornene modification was calculateed as 15.8% by integration of the vinyl peaks (integration 1.00, 2H, shaded pink) relative to methyl group of HA (integration 9.48, 3H, shaded blue).
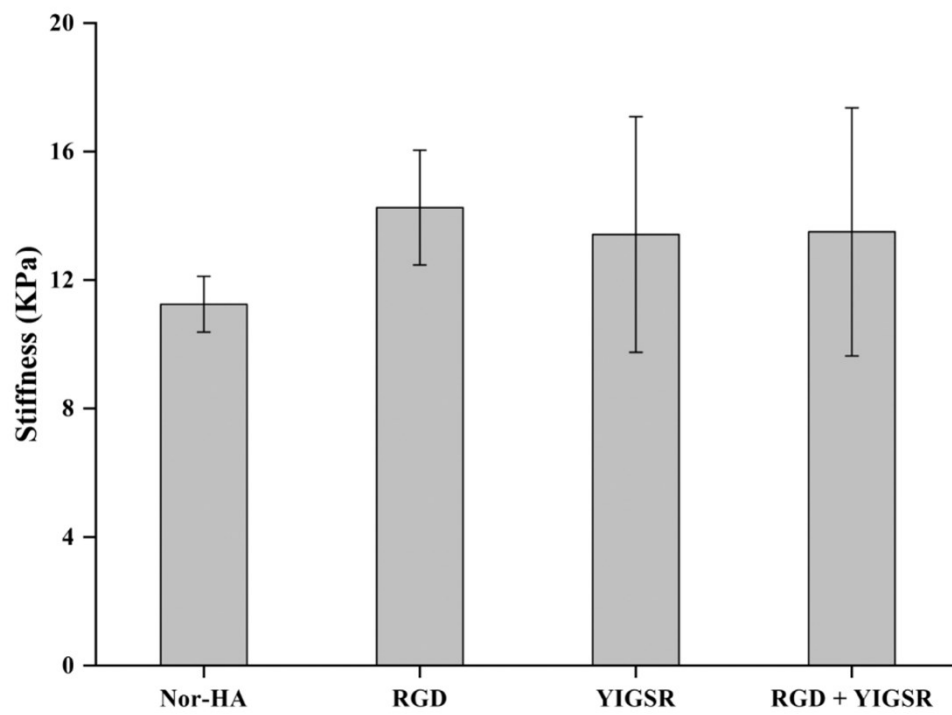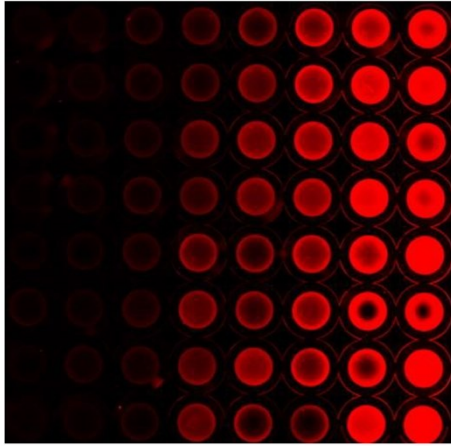
Figure S2. The stiffness of pure Nor-HA hydrogels and peptide modified hydrogels (each peptide at 2 mM concentration).
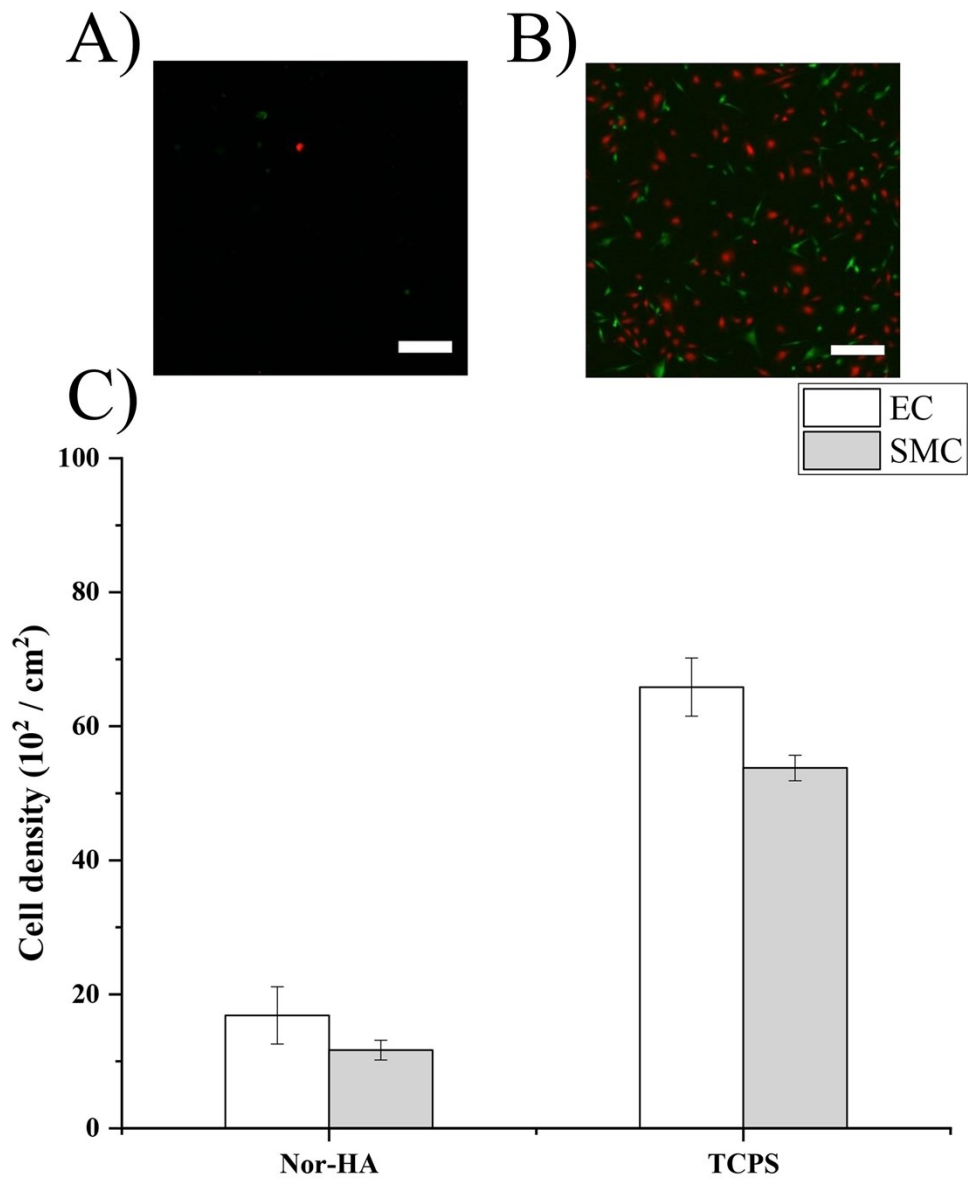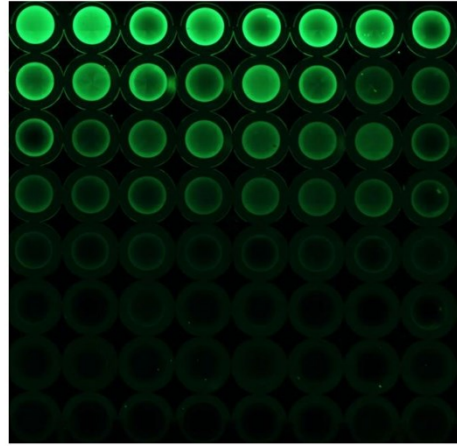
Figure S3. The fluorescent images of ECs (red) and SMCs (green) on top of A) pure Nor-HA hydrogels and B) Tissue culture polystyrene (TCPS). C) Cell densities of ECs and SMCs on pure hydrogels and TCPS. Scale bar: 250 μm.
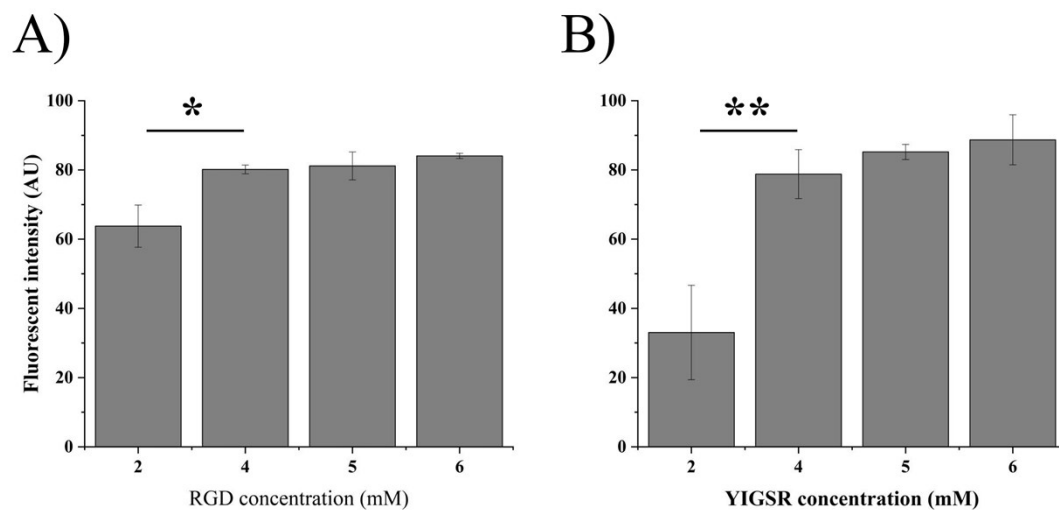
Figure S4. Fluorescent images of orthogonal peptide gradient for: A) RGD gradient to increase horizontally and B) YIGSR gradient to increase vertically.

Figure S5. Fluorescent intensities of modified hydrogels at different peptide concentrations (labeled peptides: unlabeled peptides equals 1: 49 in molar ratio) for A) RGD and B) YIGSR. Concentrations higher than 4 mM showed no significant rise of the fluorescent density (n = 3, *P < 0.05, **P < 0.01). So the maximum concentration was set at 4 mM.