Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting information

Surface having dual affinity for plasminogen and tissue plasminogen activator: *in situ* plasmin generation and clot lysis.

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Synthesis of (3r,5r,7r)-adamantan-1-ylmethyl methacrylate

^{1}H NMR spectrum of AdaMA in $CDCl_3$ is shown in **Figure S1**. ^{1}H NMR ($CDCl_3$, 298 K, 400 MHz): δ (ppm) = 6.12 (s, 1H, CH_2=C-), 5.55 (s, 1H, CH_2=C-), 3.74 (s, 2H, -O-CH_2), 2.10-1.85 (m, 6H, -CH_3, -CH- group in AdaMA), 1.80-1.45 (m, 12H, -CH_2- group in AdaMA).

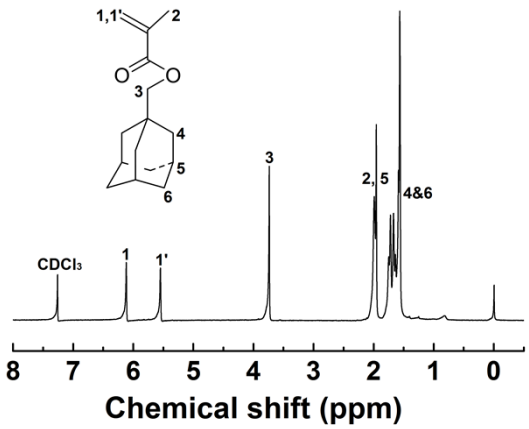

Figure S1 ^{1}H NMR spectrum of AdaMA in $CDCl_3$.

Synthesis of β-CD-(Lys)$_7$

The ^{1}H NMR spectrum of β-CD-(Lys)$_7$ in DMSO-d_6 is shown in **Figure S2**. ^{1}H NMR (DMSO-d_6, 298 K, 400 MHz): δ (ppm) =8.18 (s, 7 H, CO-NH-CH), 7.99 (s, 7 H, NCH=C), 7.74 (s, 14 H,CH_2-NH_2), 6.30-5.50 (m, O_{-2}H, O_{-3}H of β-CD), 5.08 (s, 14 H, C-CH_2-O), 4.98-4.68 (m, 14H, C_{-1}H of β-CD, NH-CH-CH_2), 4.15 (s, 14 H, C_{-6}H of β-CD), 3.90-3.15 (m, overlaps with HOD, C_{-2}H, C_{-3}H, C_{-4}H, C_{-5}H of β-CD). 2.98-2.65 (m, 14H, CH_2-CH_2-NH), 2.60-2.25 (m, overlaps with DMSO-d_6, CO-CH_2-CH_2, CH_2-CH_2-CO), 1.8-0.9 (m, 42H, NHCH-CH_2-CH_2, CH_2-CH_2-CH_2, CH_2-CH_2-CH_2NH).

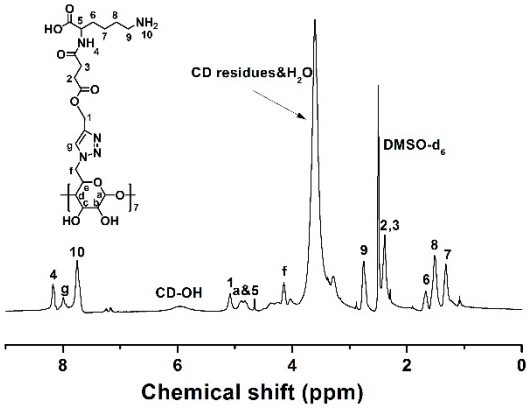

Figure S2 ^{1}H NMR spectrum of β-CD-(Lys)$_7$ in DMSO-d_6.

Characterization of copolymer

Table S1 Molecular weight and composition of copolymer

Sample	f_{Ada}[a] (%)	F_{Ada}[b] (%)	M_n,GPC ($g \cdot mol^{-1}$)	M_w/M_n (GPC)
P(AdaMA-co-HEMA)	2.50	2.47	1.08×10^5	1.97

[a] Molar monomer feed ratio. [b] Molar composition of copolymer determined by ^{1}H NMR.

Regulation of Plg binding capacity

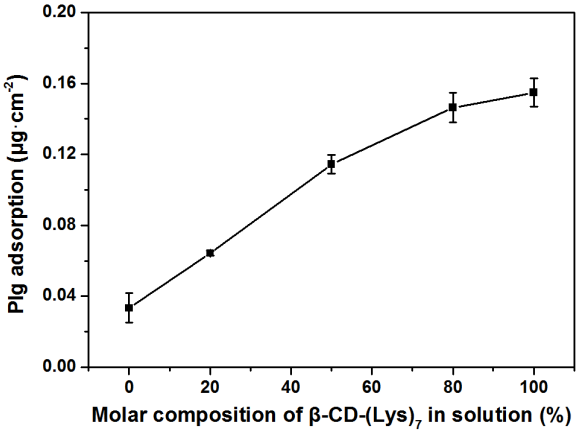

Figure S3 Plg adsorption from human plasma on PU-PHA-Pep/Lys surfaces with different molar composition of β-CD-$(Lys)_7$. Data are means ± SD (n = 3).

Specific activity of plasmin

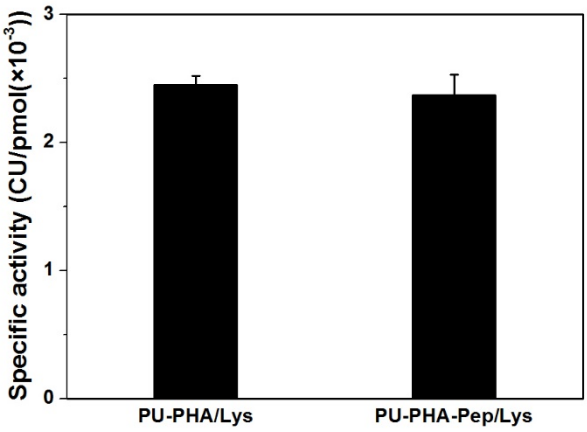

Figure S4 Specific activity of plasmin generated on the ε-lysine modified surfaces as determined using the chromogenic substrate S-2251. The surfaces were preloaded with t-PA and incubated in plasma for 1 h. Data are mean ± SD, n =3.

Specific activity of t-PA

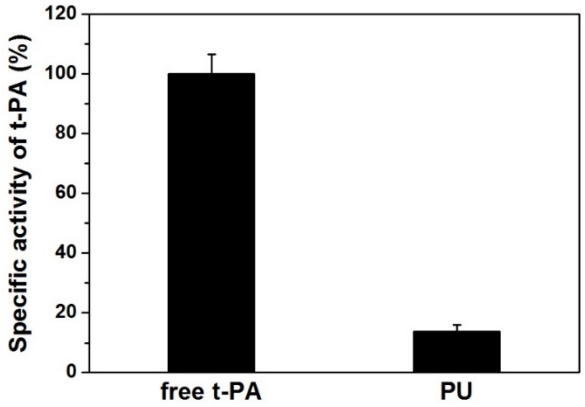

Figure S5 Specific activity of t-PA loaded on the PU surfaces as determined using the chromogenic substrate S-2251. The surfaces were preloaded with t-PA and immersed in TBS containing 0.06 mg·mL^{-1} plasminogen. The change in absorbance of the solution at 405 nm (37^{o}C) was recorded at 3 min intervals over the subsequent 1 h period. Data are mean ± SD, n =3.