Supplementary Data

An activated-platelet-sensitive nanocarrier enables targeted delivery of tissue plasminogen activator for effective thrombolytic therapy

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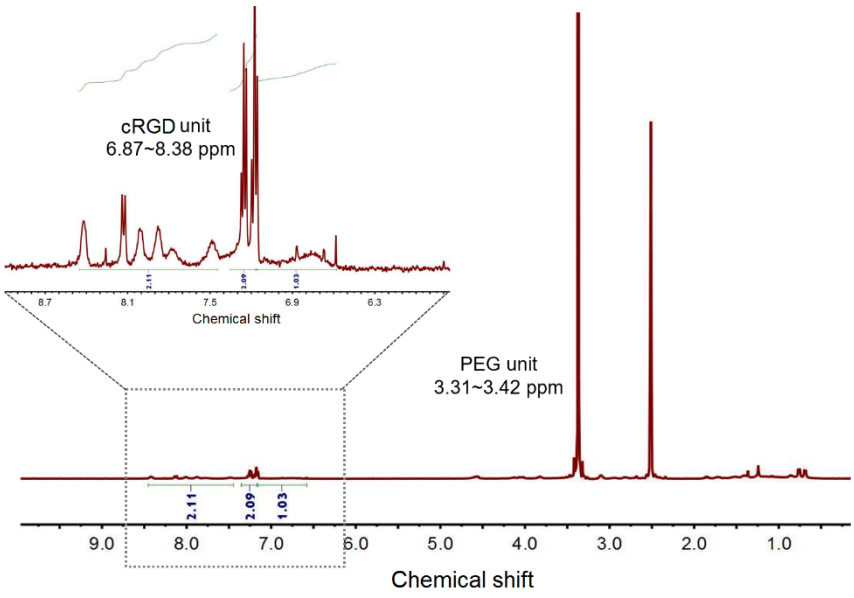


Figure S1. ^{1}H NMR spectrum of DSPE-PEG-cRGD. (400 MHz, DMSO-d_6, 298 K)

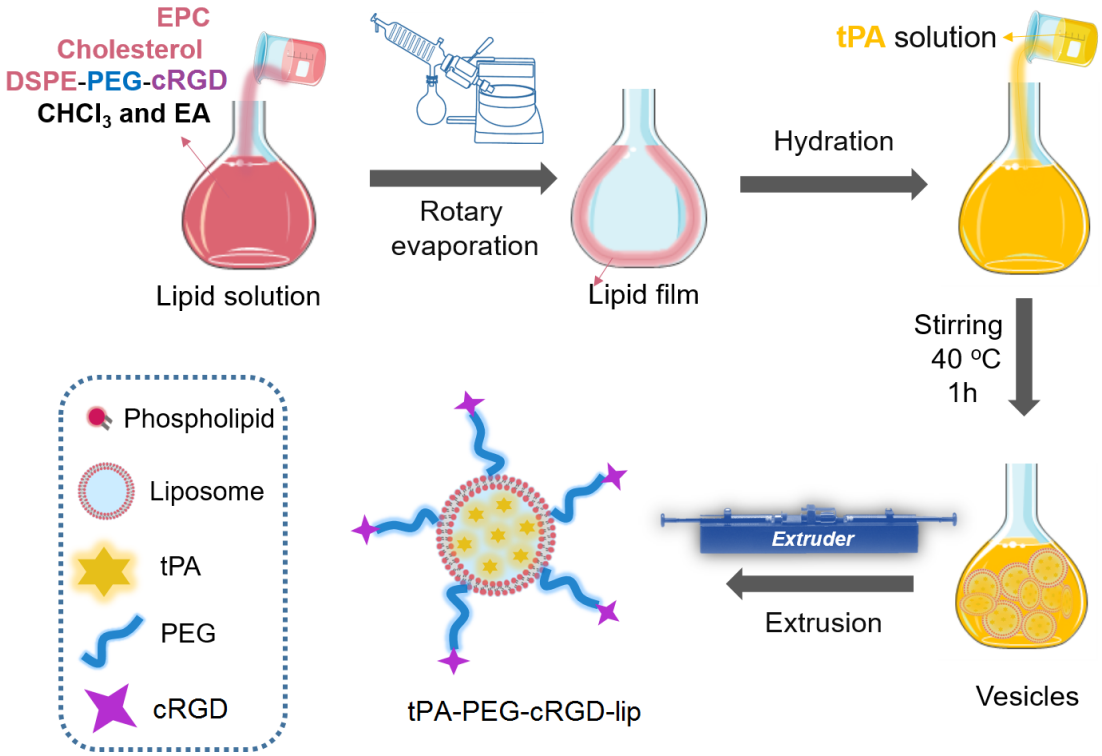


Figure S2. Schematic illustration of the preparation process of the tPA-loaded, cRGD-coated, PEGylated liposome, tPA-PEG-cRGD-lip.

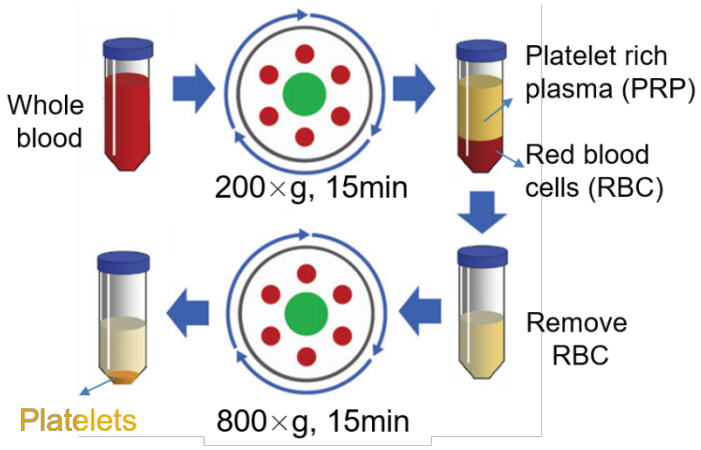


Figure S3. Illustration of differential centrifugation for platelet isolation.

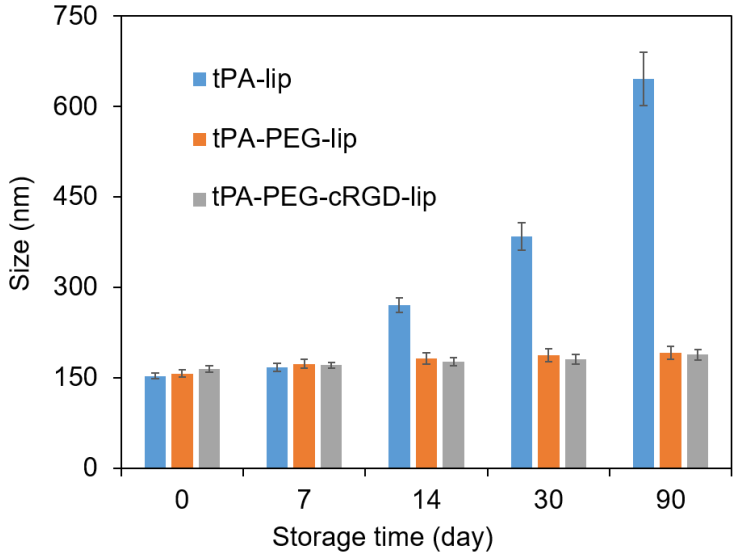


Figure S4. Variations in the liposomal size during storage at 4 ºC for 0, 7, 14, 30, and 90 days. Data are presented as the average ± standard deviation (n = 3).

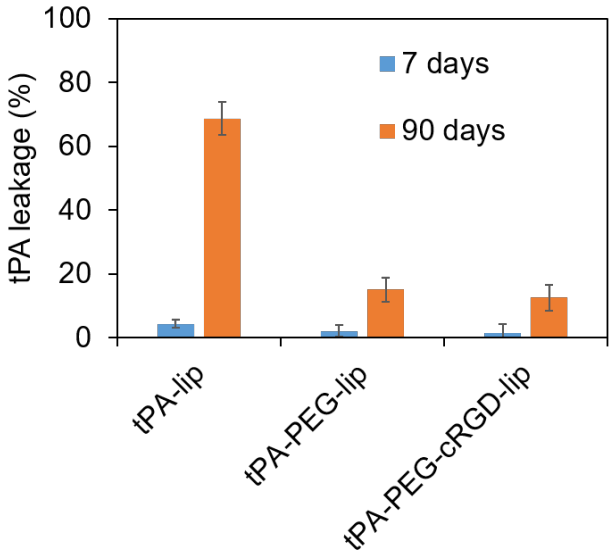


Figure S5. Variations in the tPA leakage from liposomal formulations during storage at 4 ºC for 7 and 90 days. Data are presented as the average ± standard deviation (n = 3).

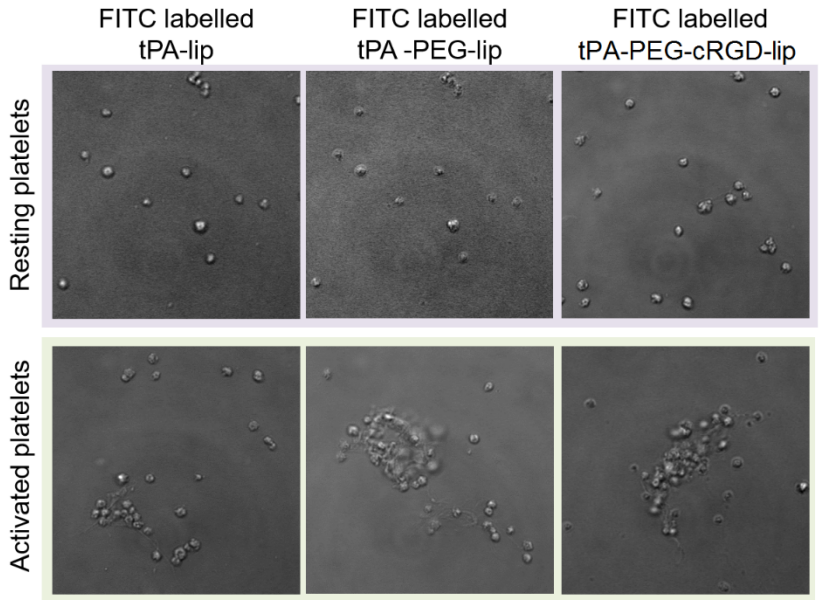


Figure S6. Bright field images of resting and activated platelets incubated with FITC-labelled tPA-lip, tPA-PEG-lip and tPA-PEG-cRGD-lip (at an equivalent tPA concentration of 0.2 mg mL^{-1}), respectively.

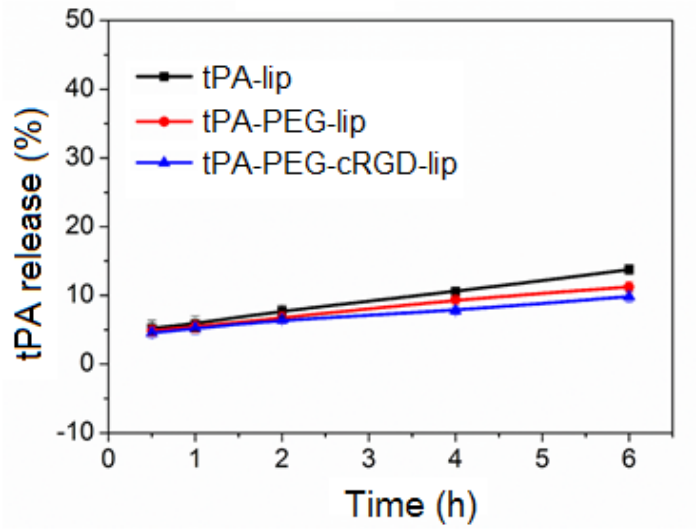


Figure S7. Passive tPA release profiles of tPA-lip, tPA-PEG-lip and tPA-PEG-cRGD-lip in pH 7.4 PBS buffer at 37 ºC (at an equivalent tPA concentration of 0.5 mg mL^{-1}). Data are presented as the average ± standard deviation (n = 3).

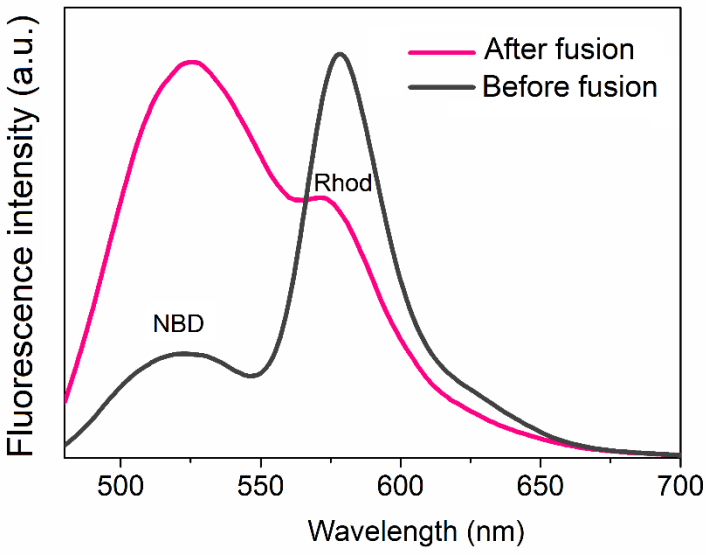


Figure S8. Fluorescence spectra of PEG-cRGD-lip (containing 1 mol% NBD-PE and 1 mol% Rhod-PE) before and after incubation with activated platelets for 30 min.

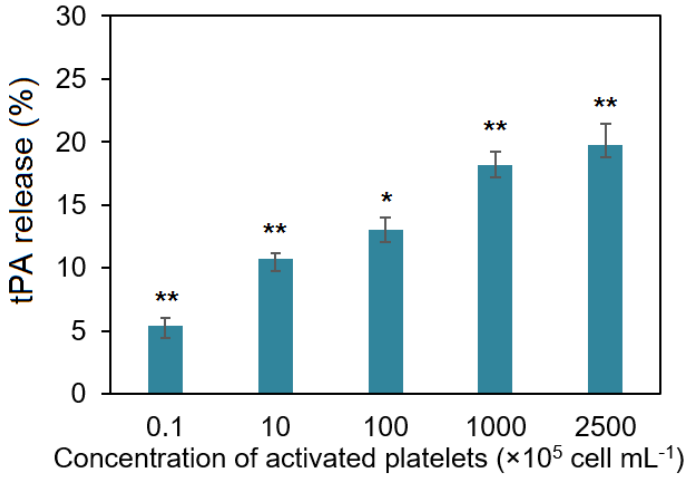


Figure S9. tPA release after incubation of tPA-PEG-cRGD-lip with different concentrations of activated platelets for 15 min. Data are presented as the average ± standard deviation (n = 3). The single asterisk symbol (*) and double asterisk symbols (**) denote to $p < 0.05$ and $p < 0.01$, respectively.

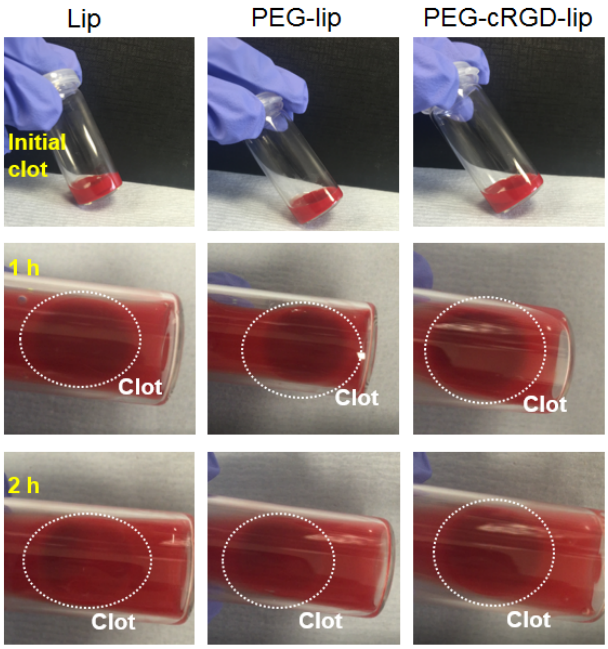


Figure S10. Observation of blood clot dissolution after treatment with Lip, PEG-lip, and PEG-cRGD-lip for 1 h and 2 h, respectively.