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## **Electronic Supporting Information**

## for

The pophyrin-loaded liposome and the graphene oxide used for the membrane pore-forming protein assay and the inhibitor screening

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## Figures



**Fig. S1** Characterization of the TAPP-loaded liposome and the GO. (a) TEM morphologies of the TAPP-loaded liposomes; (b) the size distribution of the TAPP-loaded liposomes measured by DLS; (c) AFM image of the obtained GO sheets; (d) the section analysis along the scored line as shown in Fig. c.



**Fig. S2** Fluorescence spectra obtained for alone TAPP-loaded liposome (black curve) and the TAPP-loaded liposome after two weeks of storage at 4  $^{0}$ C plus graphene oxide (red curve). Concentration: Total lipid concentration, 125 µg ml<sup>-1</sup>; GO, 8.0 µg ml<sup>-1</sup>.

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**Fig. S3** (a) The lag time was considerably longer at room temperature (red) than at 37  $^{0}$ C (black) under the same concentration of PLA<sub>2</sub>. (b) The fluorescence response was also significantly enhanced by the presence of 0.8 mg mL<sup>-1</sup> HSA (black) as compared to the same conditions without HSA (red), yet HSA alone did not cause the release of TAPP molecules (blue). Concentration: Total lipid concentration, 125 µg ml<sup>-1</sup>; GO, 8.0 µg ml<sup>-1</sup>; PLA<sub>2</sub>, 2.4 nM.



**Fig. S4** A linear plot of  $\Delta I_F$  at 648 nm versus the  $\alpha$ -toxin concentration. Concentration: Total lipid concentration, 125 µg ml<sup>-1</sup>; GO, 8.0 µg ml<sup>-1</sup>. Incubation time, 40 min.