## **Supporting Information to**

## NovelCyclicAzobenzene-ContainingVesicles:Photo/Reductant ResponsivenessandPotentialApplicationinColonDisease Treatment

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Figure S1 FT-IR spectra of PEG<sub>45</sub>-*b*-PCAzo<sub>17</sub> and PEG<sub>45</sub>-*b*-PLAzo<sub>19</sub>.



**Figure S2** UV-Vis absorption spectra of the vesicles formed by  $PEG_{45}$ -*b*-*P*CAzo<sub>17</sub> (A) and  $PEG_{45}$ -*b*-PLAzo<sub>19</sub> (B) in PB solution (pH = 7.4) under 365 nm UV light irradiation (1.4 mW/cm<sup>2</sup>) and 435 nm visible light irradiation (0.8 mW/cm<sup>2</sup>) until the photo-stationary states were achieved.



**Figure S3** UV/Vis spectra of DOX encapsulated in vesicles of  $PEG_{45}$ -*b*-PCAzo<sub>17</sub> (A) and  $PEG_{45}$ -*b*-PLAzo<sub>19</sub> (B) in the presence of  $Na_2S_2O_4$  at different moment.