

Supporting Information

for

**Dynamic monitoring the fibrosis disease by collagen
targeting near infrared probe**

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Supporting figures

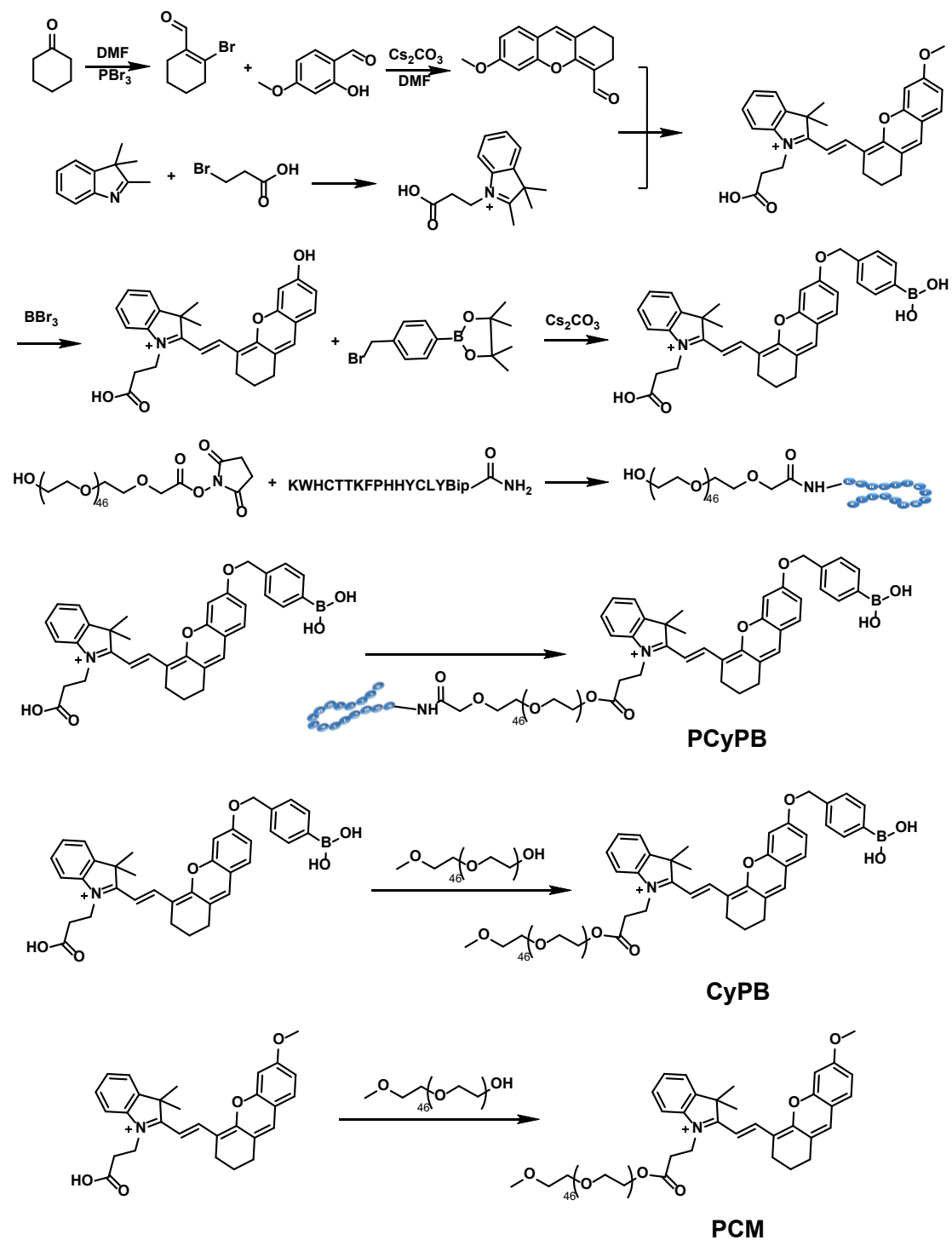


Figure S1. Schematic illustration of the synthetic route of the collagen targeted H₂O₂-NIR dyes.

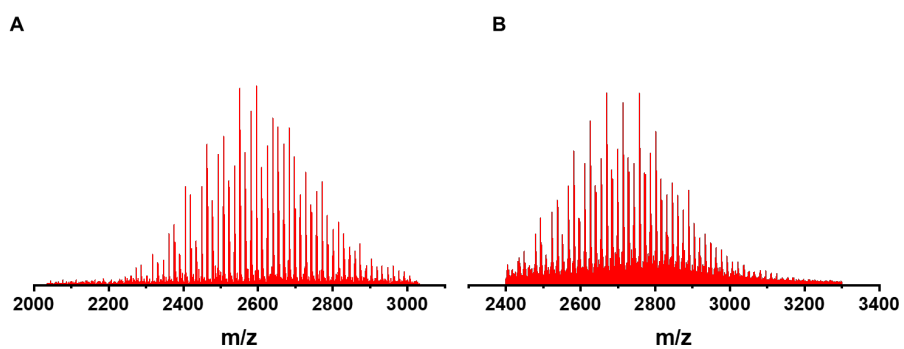


Figure S2. MALDI TOF spectra of the PCM (A) and CyPB (B) probes conjugated with PEG₂₀₀₀.

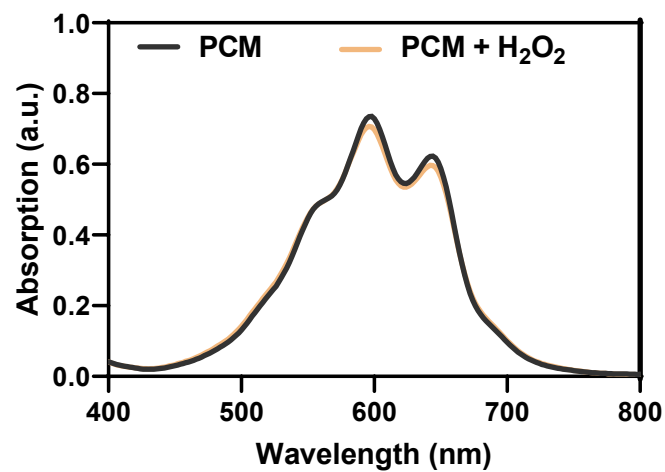


Figure S3. The absorption spectrum of PCM in distilled water with or without the H₂O₂ (100 μ M).

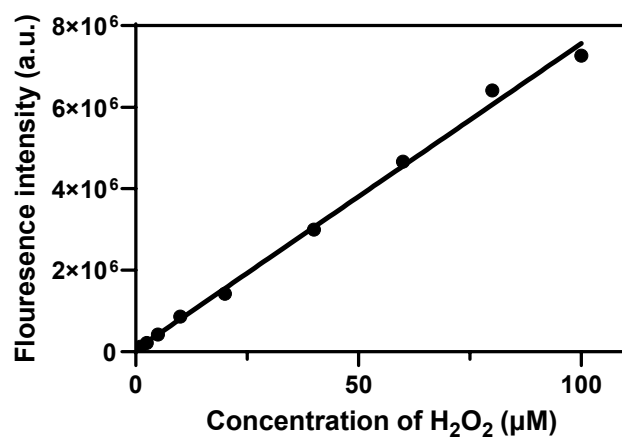


Figure S4. Fluorescence intensity (at 708 nm) of PCyPB (1 μM) with excitation at 680 nm at different H₂O₂ concentration (1-100 μM).

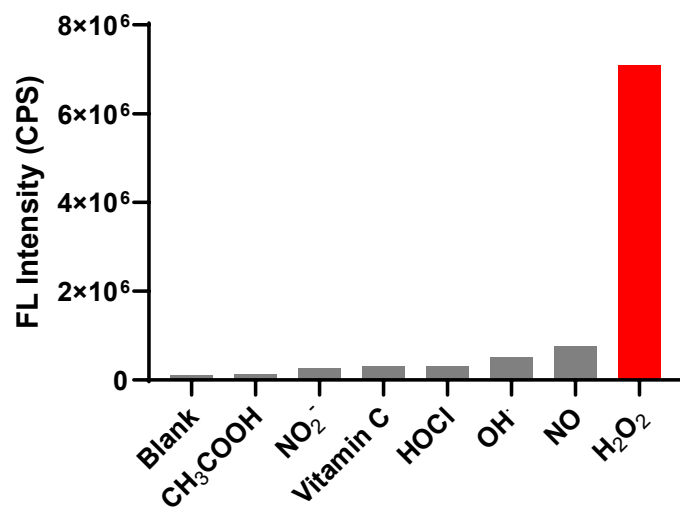


Figure S5. Fluorescence intensity (at 708 nm) of PCyPB (1 μM) with excitation at 680 nm in the presence of various species.

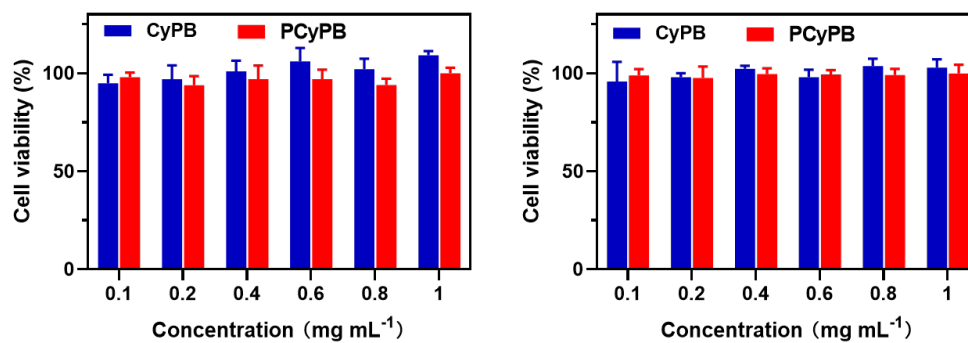


Figure S6. Cell viability of Pan02 tumor cells (left) and LX-2 cells (right) treated with different concentration of probes.

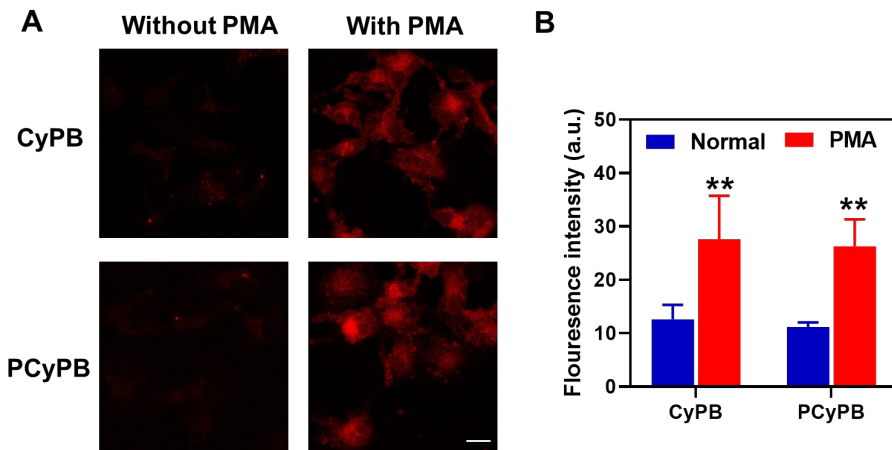


Figure S7. (A) Real-time fluorescence imaging of LX-2 cells treated with 5 μ M PCyPB or CyPB for 4h with or without the presence of PMA. Scale bar: 20 μ m. (B) The semiquantitative fluorescence intensity of LX-2 cells in Fig. S7A. Data are mean \pm s.e.m. and were analyzed by Student's t test. ** $P < 0.01$.

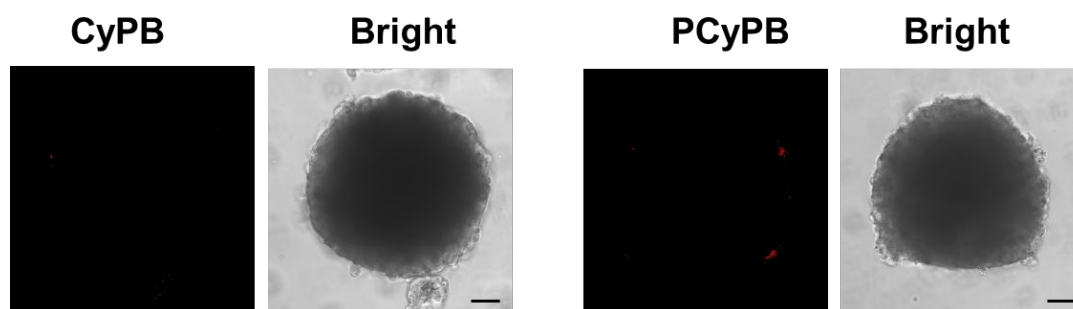


Figure S8. The LX-2 MCs treated with different probes without the presence of the H_2O_2 show no obvious fluorescence. Scale bar: 50 μm .

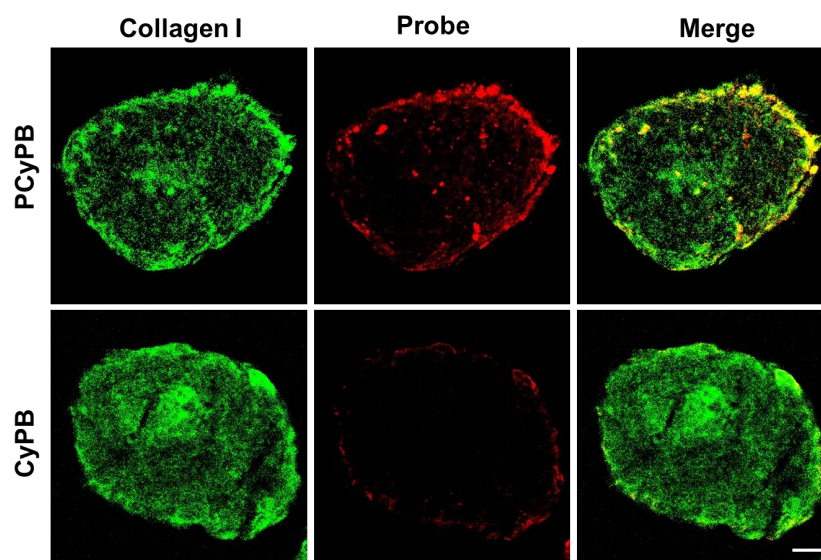


Figure S9. Immunofluorescence staining of the collagen (green) in LX-2 MCs treated with different probes (red) with the presence of the H₂O₂. Scale bar: 50 μ m.

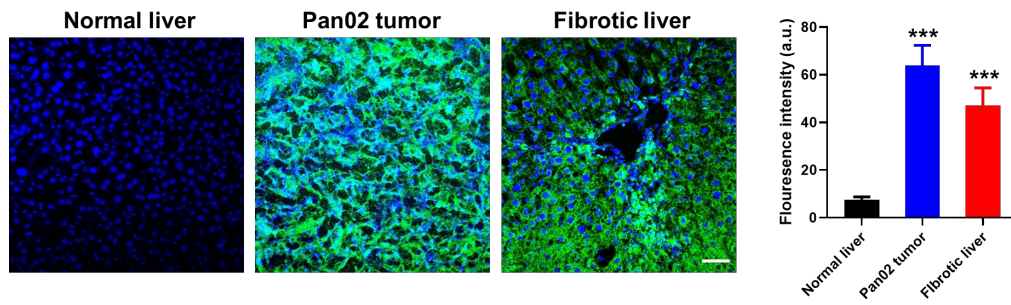


Figure S10. CLSM image of the H₂O₂ level (green) in different tissue, the semiquantitative fluorescence intensity of H₂O₂ level in different tissue was presented in the right. Scale bar: 50 μ m. Data are mean \pm s.e.m. and were analyzed by on-way ANOVA. ***P<0.001.

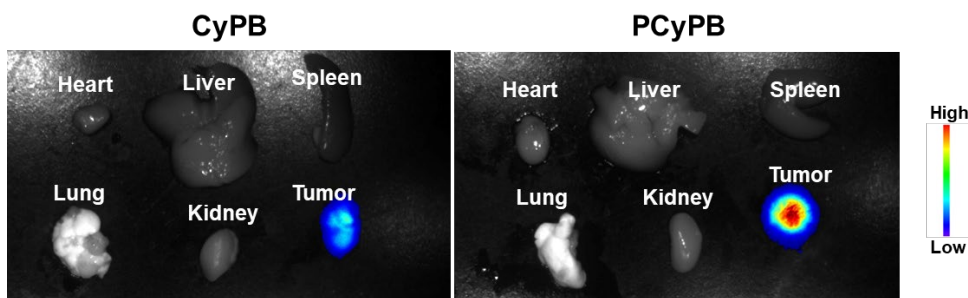


Figure S11. Ex vivo NIR imaging of the major organs after 96 h treated with different probes in Pan02 tumor bearing mice.

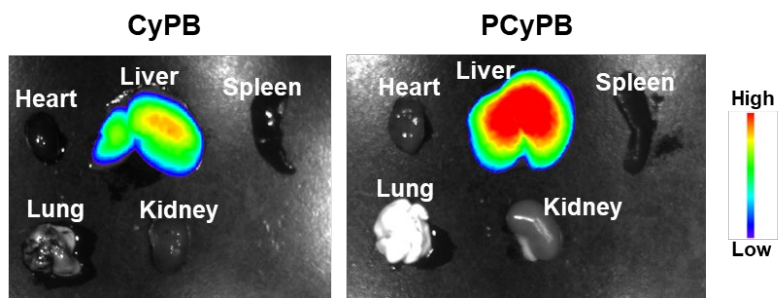


Figure S12. Ex vivo NIR imaging of the major organs after 96 h treated with different probes in liver fibrosis mice.

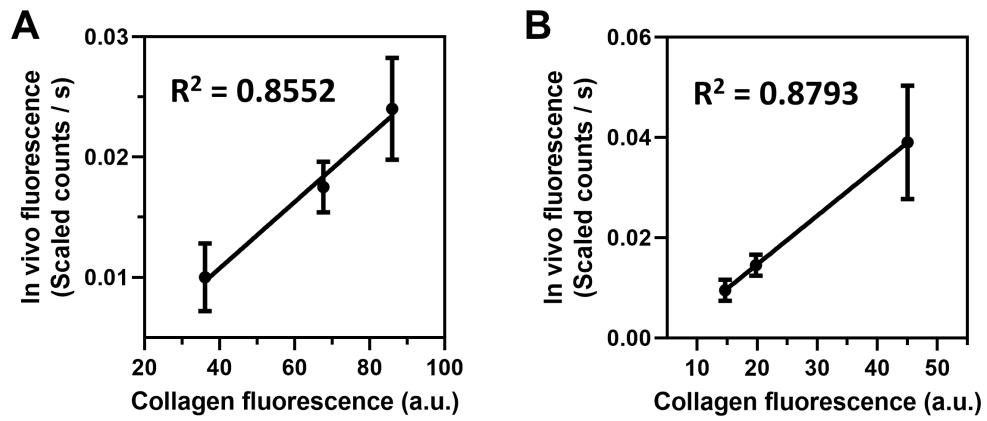


Figure S13. The relationship between fluorescence intensity of PCyPB and the collagen in Pan02 tumor (A) and fibrotic liver (B) obtained by analysis of Fig. 5C&D, Fig. 5G&H.