Supplemental Information:

**Fluorinated Polymer-Photosensitizer Conjugates Enable Improved Generation of ROS for Anticancer Photodynamic Therapy**

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Figure S1. Gel Permeation Chromatography (GPC) traces of polymers 1 and 3.

Figure S2. NMR spectra of copolymer 1 and ZnEpPor-copolymer 3 in D₂O. (A) ¹H NMR spectra of copolymer 1 with corresponding peak assignments. (B) ¹H NMR spectra of ZnEpPor-copolymer 3.
with corresponding peak assignments for ZnEpPor in the conjugate. (C) $^{19}$F NMR of copolymer 1. (D) $^{19}$F NMR of ZnEpPor-copolymer 3.

**Figure S3.** UV-visible spectroscopy used to probe attachment of ZnEpPor PS of the sample isolated following GPC. Absorbance spectrum of column purified ZnEpPor-copolymer 3 (Top) and the absorbance spectrum from the isolated GPC trace (Bottom).
Figure S4. Spectroscopic investigation of 3 to determine concentration of ZnEpPor 2 following the click reaction by monitoring the $\lambda_{\text{max}}$ at 440 nm. (A) UV-visible spectroscopy study of 3 in ultra-pure water at concentrations ranging from 0.1 – 16 µM, the absorbance values at 440 nm were used to construct (B) a plot of the concentration of 3 at $\lambda_{\text{max}}$ of 440 nm versus the molar concentration of 2 per conjugate as determined by the Beer-Lambert Law, $R^2 = 0.997$. 
**Figure S5.** Dynamic Light Scattering to probe self-assembly of ZnEpPor-copolymer 3 in ultrapure water at various concentrations labeled above each of the plots with their corresponding hydrodynamic radii.
Figure S6. Oxygen-dependent decay of ABDA at 400 nm in oxygen saturated solutions. (A) Time dependent changes in absorbance of ABDA mixed with ZnEpPor 2 and (B) ZnEpPor-copolymer 3. (C). Relative absorbance intensity at 400 nm of copolymer 1, ZnEpPor 2, and ZnEpPor-copolymer 3 in the presence of ABDA and oxygen following exposure to white light (~10 W/cm²) (PS= 5 µM, ABDA = 150 µM).
Figure S7. Representative LIVE/DEAD images of A431 and B16F10 cells assayed after 8-hour incubation of copolymer 1. Samples left in the dark (A-B), exposed to white light (C-D), and dead controls exposed to 70% ethanol.
Table S1. Average viability values determined after ImageJ analysis of images from the LIVE/DEAD viability assay following 8-hour incubation with samples and exposure to light or dark.

<table>
<thead>
<tr>
<th>Sample</th>
<th>A431, % viability (avg. ± S.D.)</th>
<th>B16B10, % viability (avg. ± S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Light</td>
<td>Dark</td>
</tr>
<tr>
<td>Cells Only</td>
<td>96.19 ± 0.05</td>
<td>99.22 ± 0.01</td>
</tr>
<tr>
<td>Copolymer 1</td>
<td>97.55 ± 0.02</td>
<td>100 ± 0</td>
</tr>
<tr>
<td>ZnEpPor 2</td>
<td>1.79 ± 0.01</td>
<td>99.18 ± 0.01</td>
</tr>
<tr>
<td>ZnEpPor-copolymer 3</td>
<td>1.59 ± 0.02</td>
<td>100 ± 0</td>
</tr>
</tbody>
</table>
Figure S8. Dark controls for cell lines incubated with ZnEpPor-copolymer 3 and ZnEpPor 2.