

## Electronic Supplementary Information

### Drug-loaded nanoparticles induce gene expression in human pluripotent stem cell derivatives

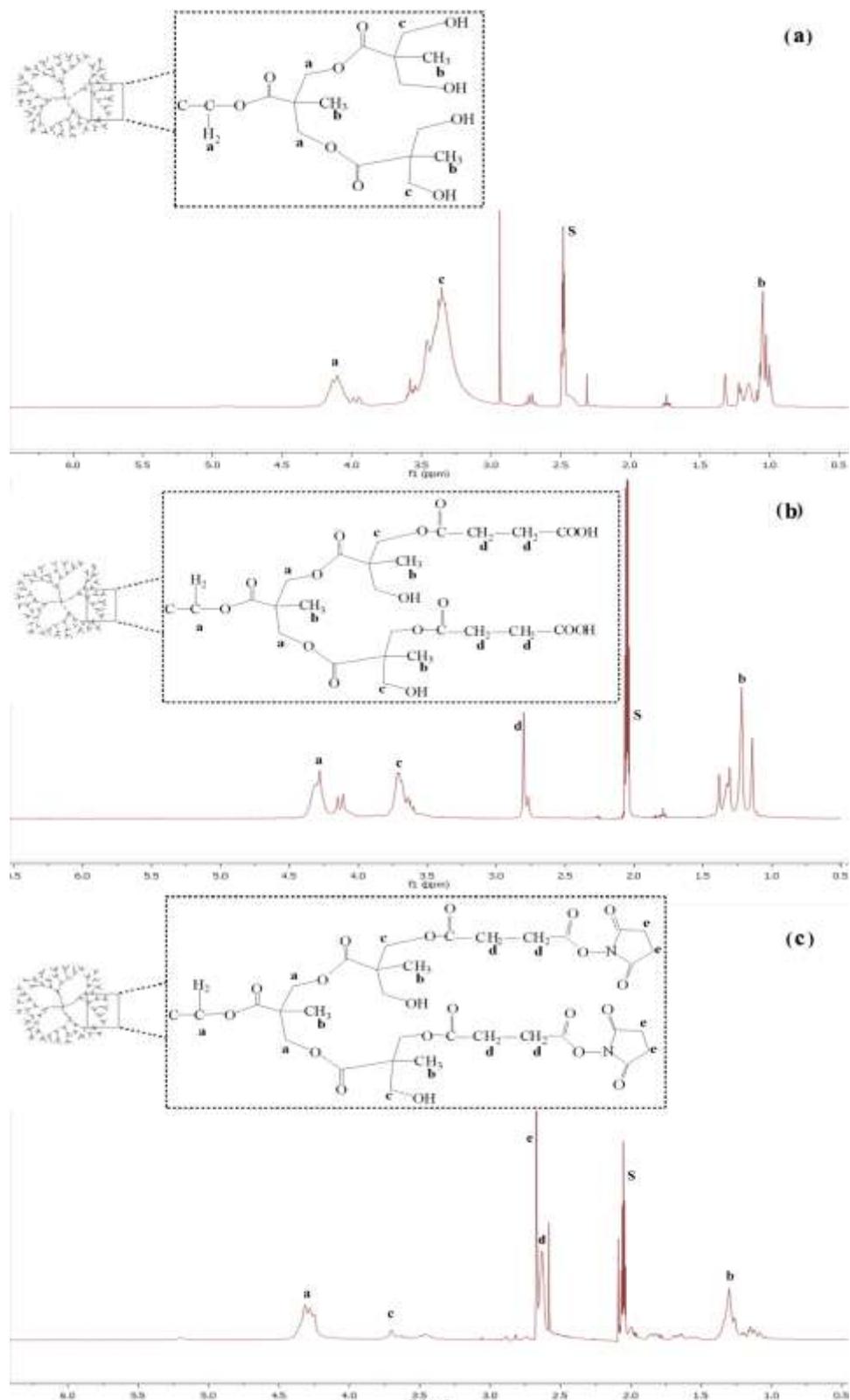
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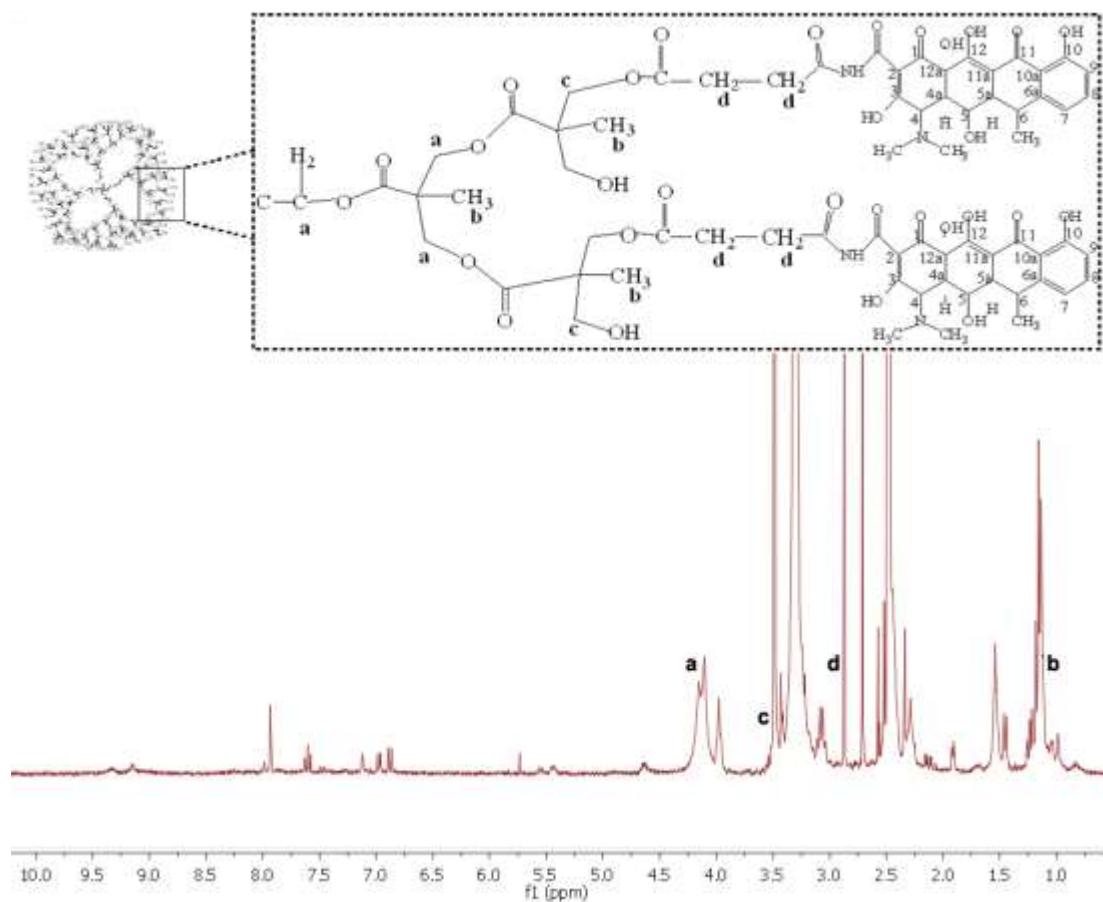
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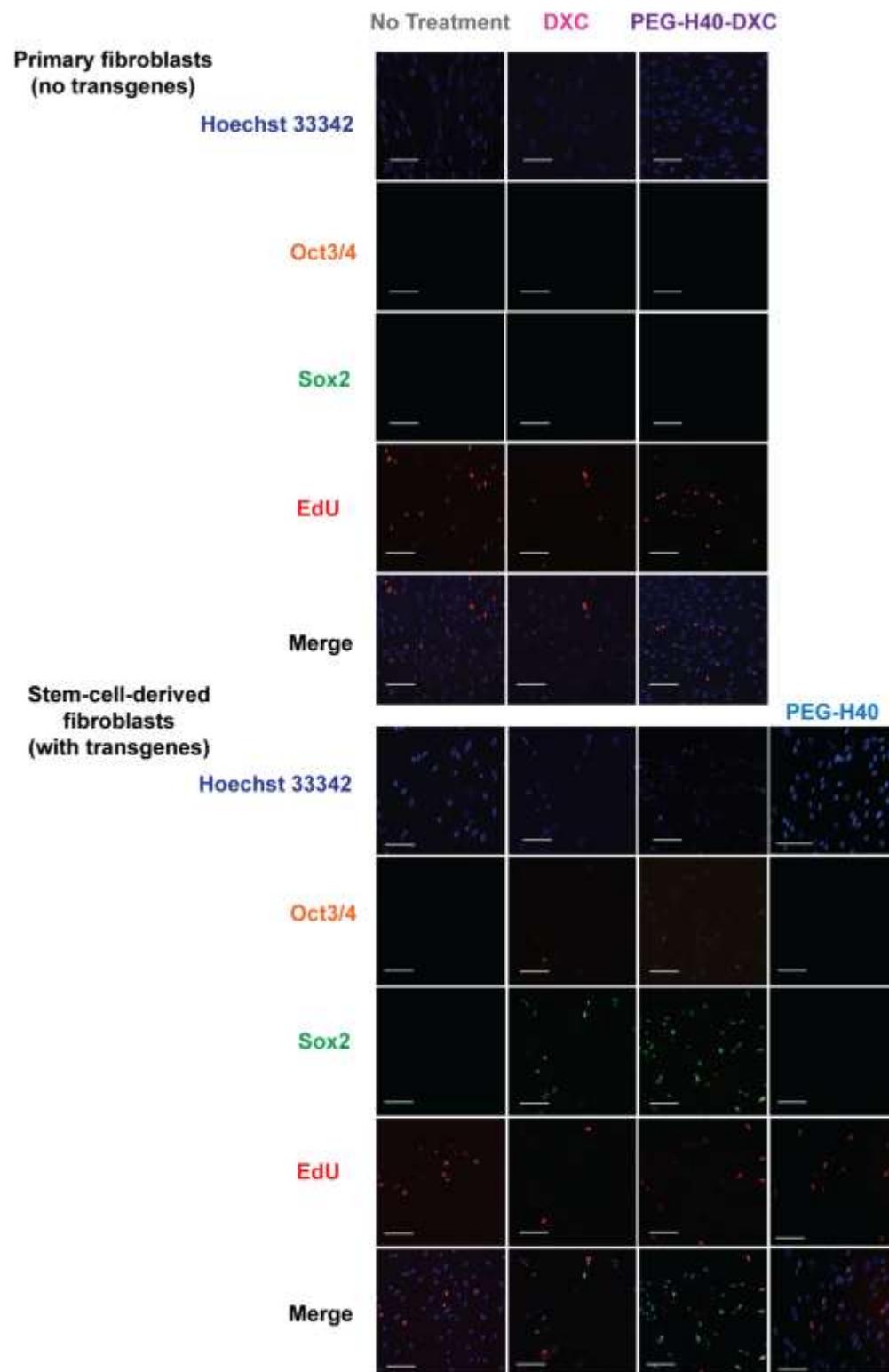
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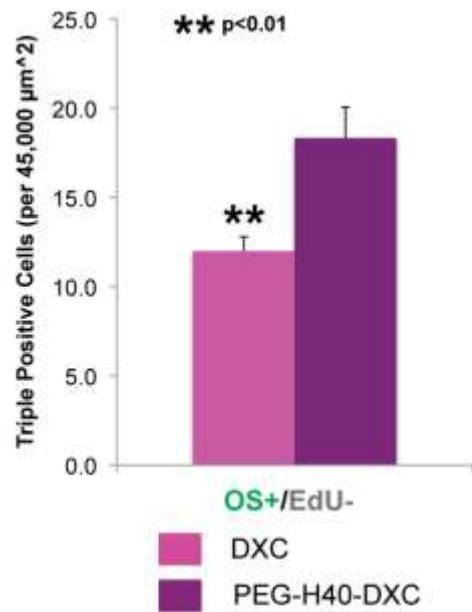
**Figure S-1.**  $^1\text{H}$  NMR spectra of (A) H40-OH in DMSO-d<sub>6</sub>, (B)  $_{32}(\text{HOOC})\text{-H40-(OH)}_{32}$  in acetone-d<sub>6</sub>, and (C)  $_{32}(\text{OH})\text{-H40-NHS}$  ester in acetone-d<sub>6</sub>.



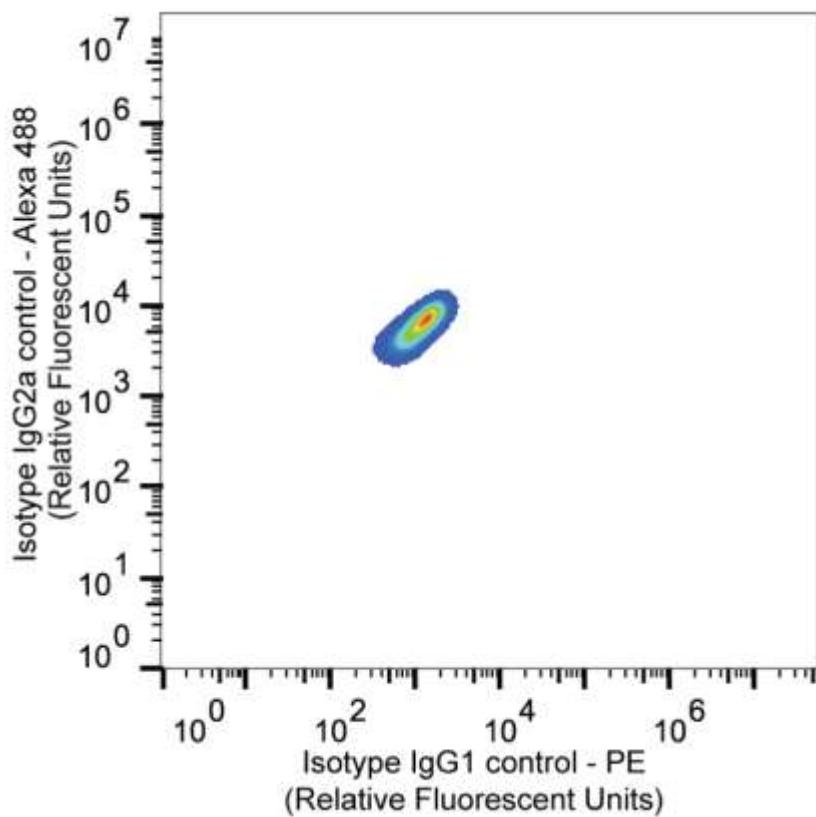
**Figure S-2.**  $^1\text{H}$  NMR spectra of  $^{32}\text{OH}\text{-H40-DXC}$  in  $\text{DMSO-d}_6$ .



**Figure S-3.** Fluorescent images of proliferative cells of the fibroblast lines in Fig. 7a. A Click-iT EdU assay was performed prior to imaging. EdU is incorporated during DNA synthesis, and click chemistry is utilized for fluorescent detection. Immunocytochemistry was performed after the Click-iT EdU assay against Oct3/4 and Sox2, as previously described in Fig. 7c.



**Figure S-4.** Bar graph of the number of cells per representative fluorescent image ( $45,000 \mu\text{m}^2$ ) that are EdU- (no EdU detected via Click-iT EdU assay), but OS+ (positive staining for Oct3/4 and Sox2). Double asterisk represents a statistically significant difference between DXC-treated and PEG-H40-DXC treated secondary C1 fibroblasts with a  $p<0.01$ , two-tailed Student t-test.



**Figure S-5.** Representative heatmap of background staining from fluorophore-conjugated isotype control antibodies with C1 fibroblasts.