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[Supplementary Figure & Table]



Supplementary Figure 1. ¹H NMR spectra of PLT, PEI, and LDA.



Supplementary Figure 2. Transmission electron microscope (TEM) image of PLT/DNA complexes (N/P 10).



Supplementary Figure 3. Gel retardation and DNA protection assay. (A) gel electrophoresis of PLT/DNA complexes at various N/P ratios. (B) DNA was released from by PLT/DNA complexes at N/P ratio 5 by SDS.



Supplementary Figure 4. Osmolarity of PLT, PEI 1.2 kDa and PEI 25 kDa measured by

osmometer

Supplementary Table 1. Molecular weight of PLT measured using GPC.

Sample	Mn (Da)	Mw (Da)	Polydispersity
PLT	4574	9871	2.158229

Mn (number average mol weight) and Mw (weight average mol weight)



Supplementary Figure 5. (A) Cell viability and (B) transfection efficiency of PLT/DNA and PEI (1.2kDa)/DNA complexes in HepG2 cell line. [n = 3, error bar represents standard deviation; *p < 0.1, **p < 0.05, ***p < 0.01, one-way ANOVA compared to that of PEI/DNA complexes].