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Supplementary Figure 1. ¹H NMR of DP.

From the ¹H NMR calculations, it was observed that one mole of dexamethasone was conjugated per 1.3 mol of PEI.



Supplementary Figure 2. Size distribution of the DP/CM/pDNA nanoparticles.



Supplementary Figure 3. Transfection efficiencies of the DP/CM/pLuc nanoparticles into the various cells. CMs were prepared from LA-4 mouse lung epithelial, L2 rat lung epithelial, and C6 rat glioblastoma cells. The DP/CM/pLuc nanoparticles were prepared with CM from LA-4, L2, and C6 cells. The nanoparticles were transfected into LA-4, L2, and C6 cells to verify homotypic targeting effects. The transfection efficiency was measured by luciferase assays. The results indicated that the transfection did not have cell-type specificity, suggesting that the DP/CM/pLuc nanoparticles did not have homotypic targeting effects. The data presented are the mean value ± standard deviation of quadruplicate experiments.



Supplementary Figure 4. Cytotoxicity of the carrier/pDNA complexes. PEI2k/pLuc, PEI25k/pLuc, DP/pLuc, and DP/CM/pLuc nanoparticles were prepared at their optimal ratios. The nanoparticles were transfected into LA-4 cells. After 24 h, the cytotoxicities of the nanoparticles were evaluated by MTT assays. The data presented are the mean value \pm standard deviation of quadruplicate experiments. **P < 0.01 compared with PEI2k/pDNA and PEI25k/pDNA, but no statistical significance compared with control, naked pDNA, and DP/pDNA.