Supporting Information for

Impacts of Cationic Lipid-DNA Complexes on Immune Cells and Hematopoietic Cells *in Vivo*

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	DOTAP (μg)	Cholesterol (μg)	DSPE-mPEG2K (μg)	Nucleic acid
CLN	443	239	134	no
CLN/siRNA	443	239	134	NC siRNA 24 μg
CLN/mRNA	443	239	134	mRNA 24 μg
CLN/DNA	443	239	134	pcDNA 3.1(-)GFP 24 μg

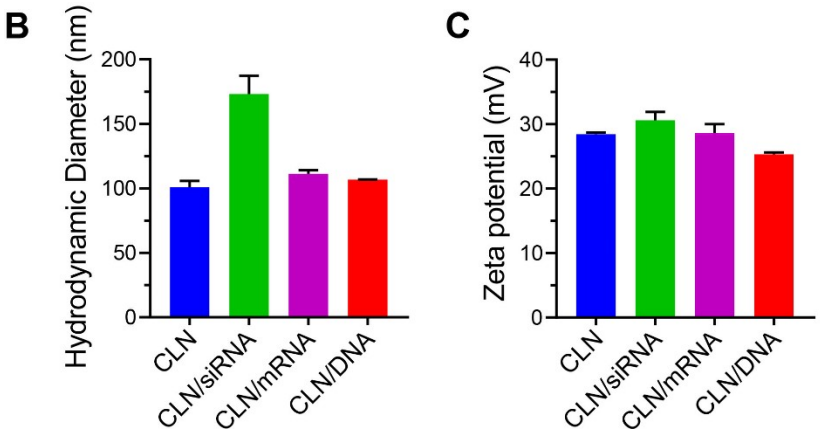

Fig. S1. Characterization of cationic lipid nanoparticles. (A) The composition of cationic lipid nanoparticles. The hydrodynamic diameter (B) and zeta potential (C) of CLN and CLN/DNA measured by dynamic light scattering (n = 2 per group).

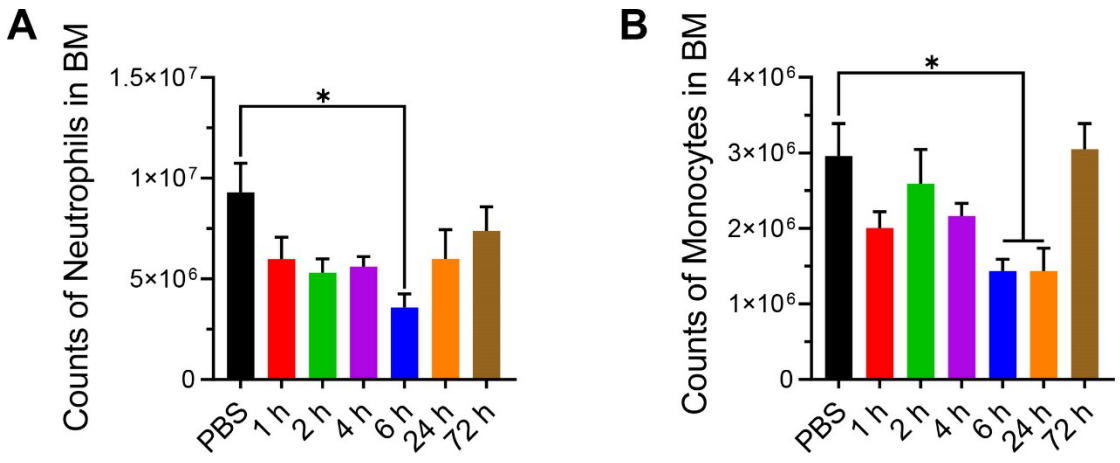

Fig. S2. Dynamic interaction of CLN/DNA with neutrophils and monocytes over time. C57BL/6 mice were treated with *i.v.* injection of PBS or CLN/DNA, the dose of nucleic acid was 1.1 mg/kg. After 1 h, 2 h, 4 h, 6 h, 24 h and 72 h of CLN/DNA treatment, the control group being assessed 72 h following the administration of PBS. BM cells were collected and analyzed by flow cytometry. The quantity of Neutrophils (A) and Monocytes (B) in BM at different time points after CLN/DNA treatment (n=3-5 per group). Data are presented as mean ± S.E.M. *, $p < 0.05$.

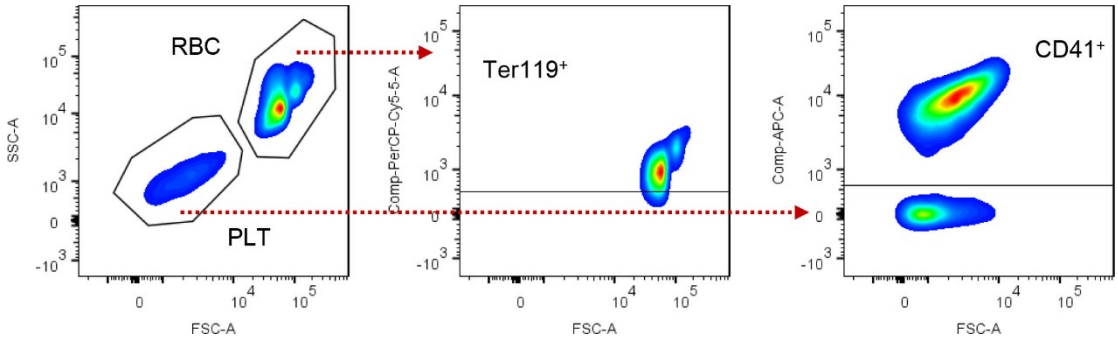

Fig. S3. The gating strategy of flow cytometry.

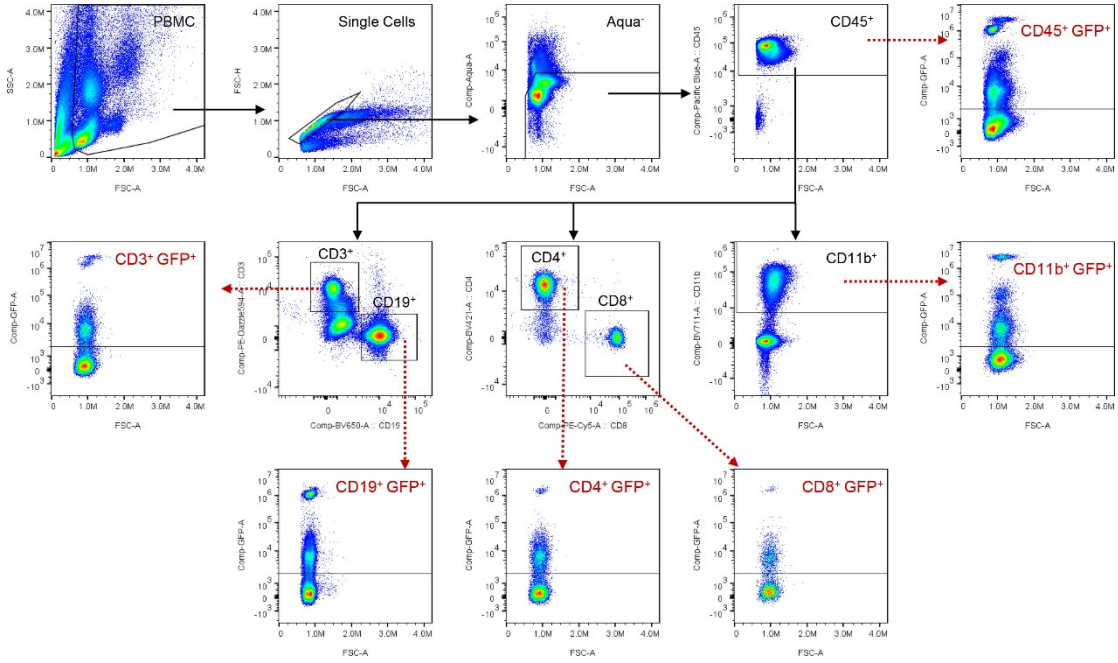

Fig. S4. The gating strategy of flow cytometry.

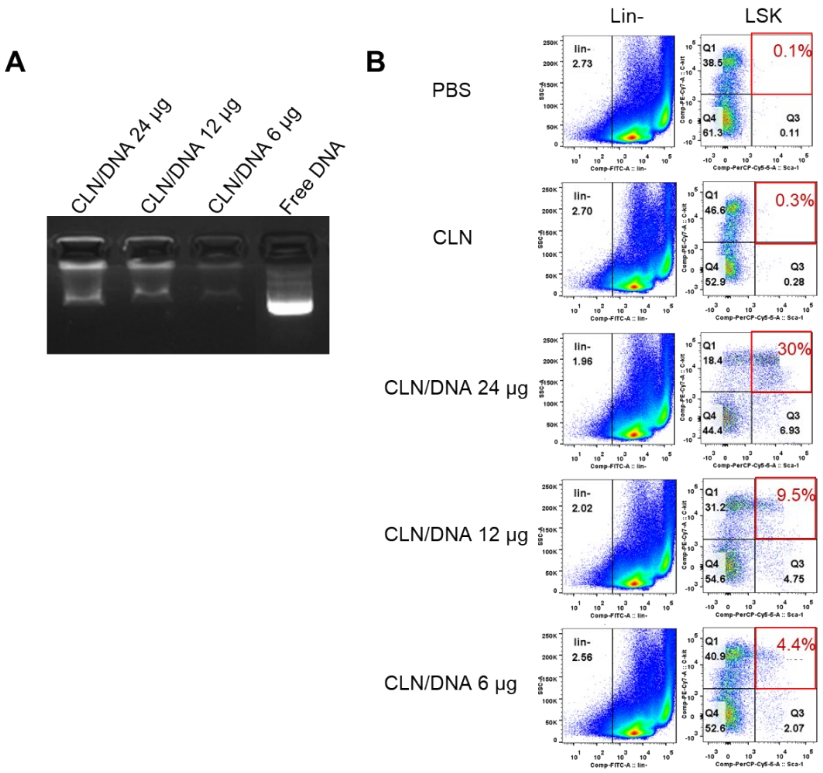

Fig. S5. CLN/DNA induced HSC amplification was dose-dependent. Preparation of lipids encapsulated with different doses of DNA (CLN/DNA-24 μg, CLN/DNA-12 μg and CLN/DNA-6 μg). (A) The entrapment efficiency of CLN/DNA was detected by agarose gel assay. (B) C57BL/6 mice were treated with *i.v.* injection of PBS, CLN or CLN/DNA, after 24 h of nanoparticles treatment, BM cells were collected and analyzed by flow cytometry. The percentage of LSK in BM at 24 h after cationic lipid nanoparticles treatment.