

Supporting Information

Amphiphilic Polyethylenimine (PEI) as High efficient non-viral gene carrier

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Content

A. NMR Spectrum	2
B. Cytotoxicity Study	8

A. NMR Spectrum

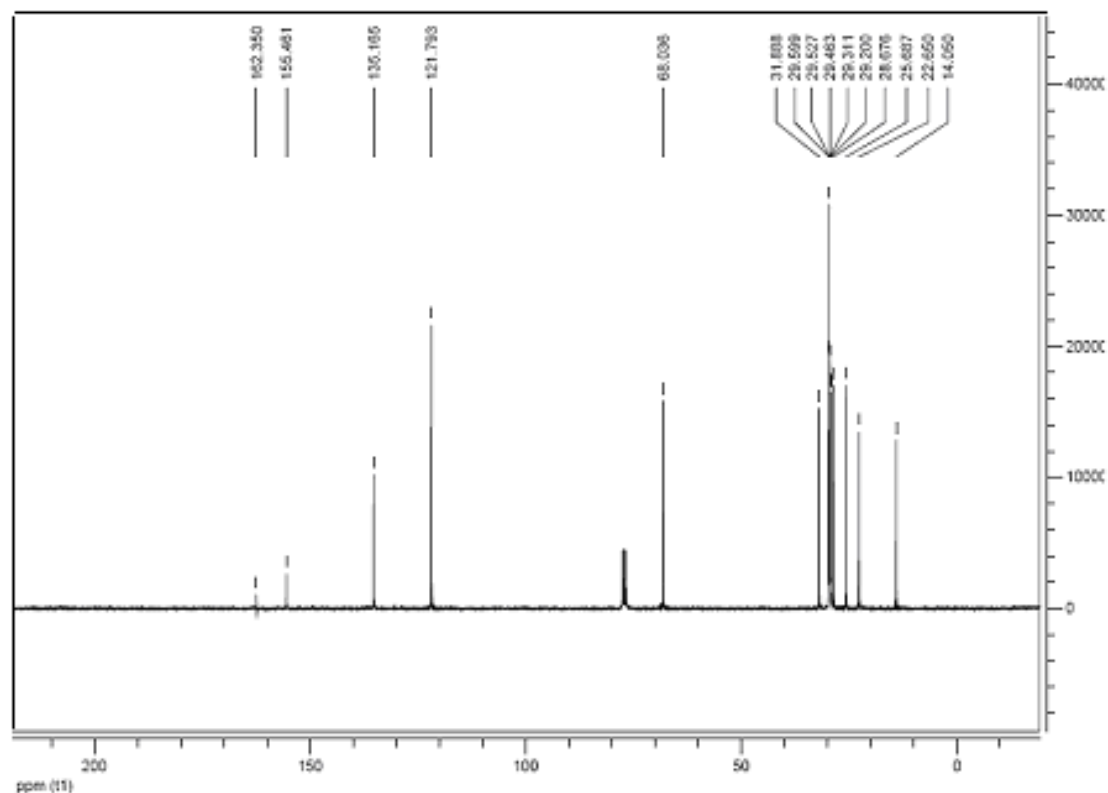
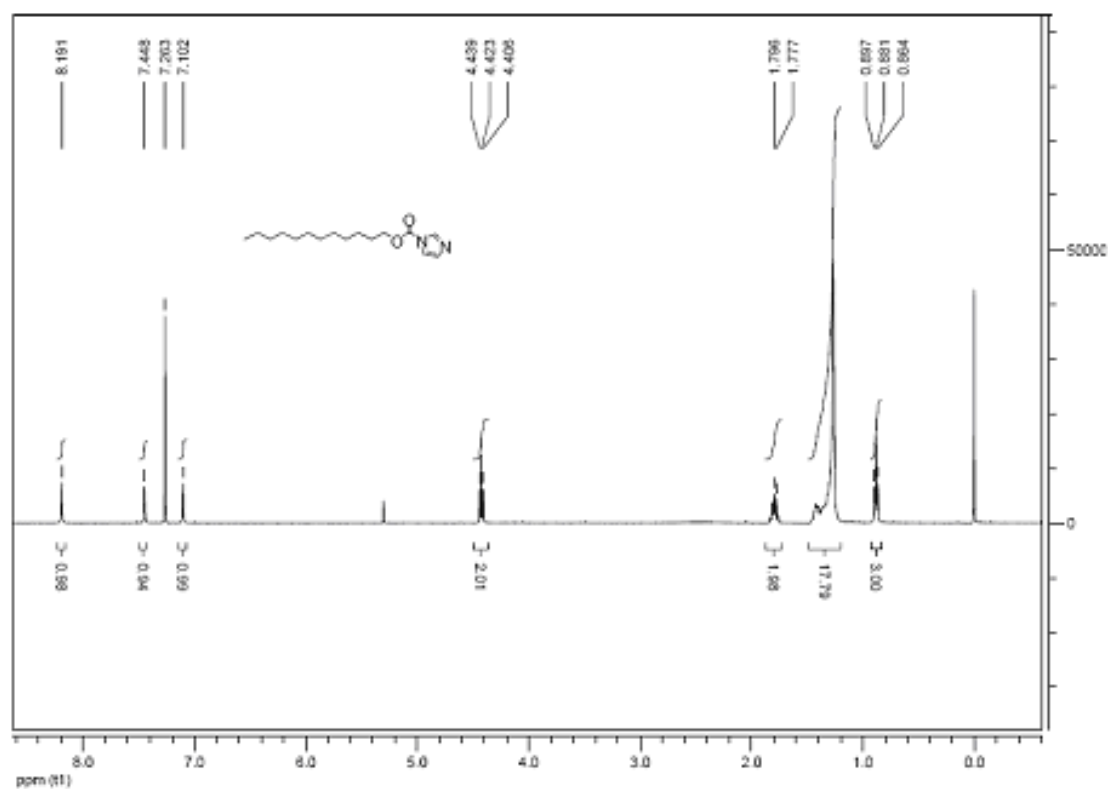


Fig S1 ¹H NMR and ¹³C NMR of LD-CDI (1)

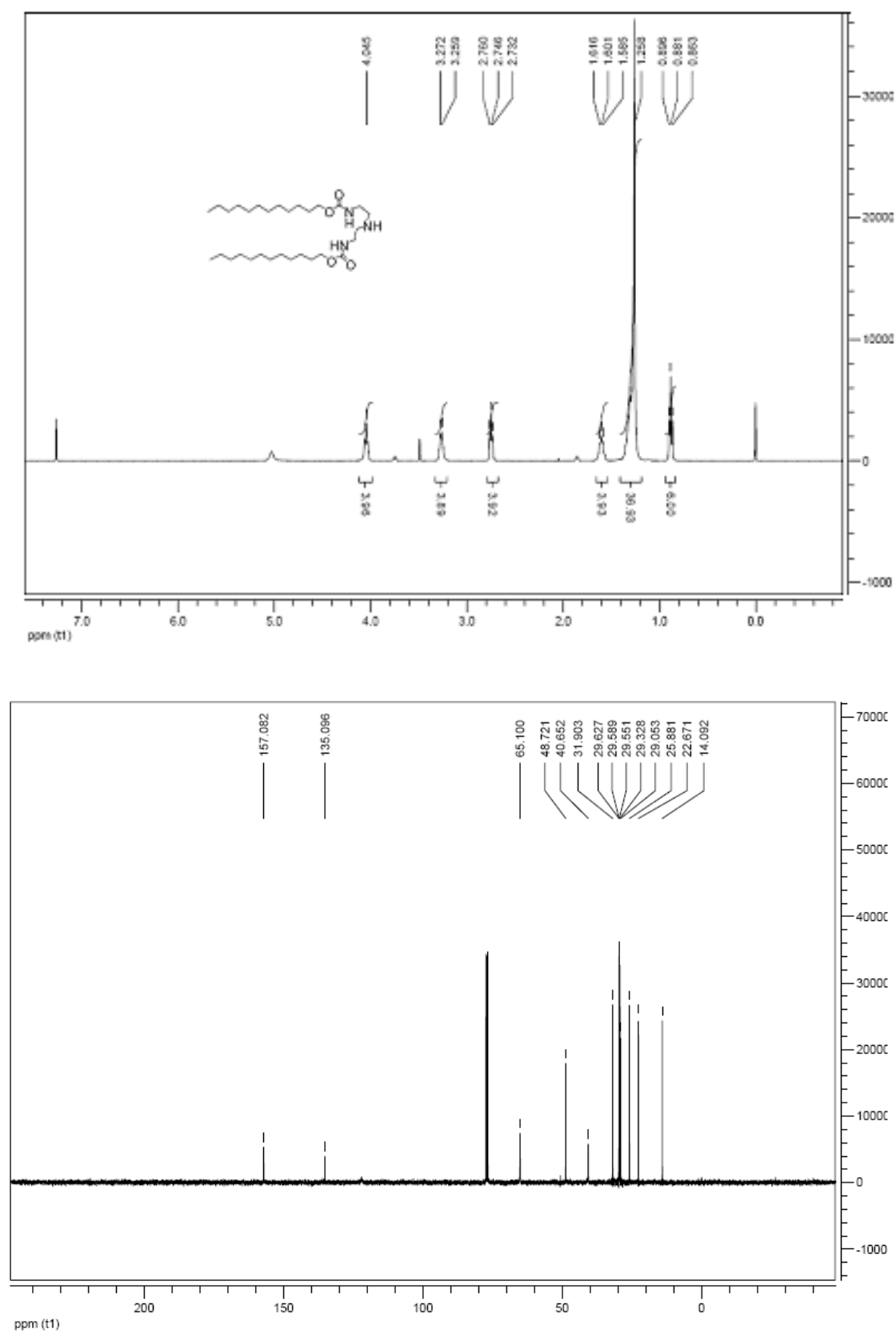


Fig S2 ^1H NMR and ^{13}C NMR of LD0 (2)

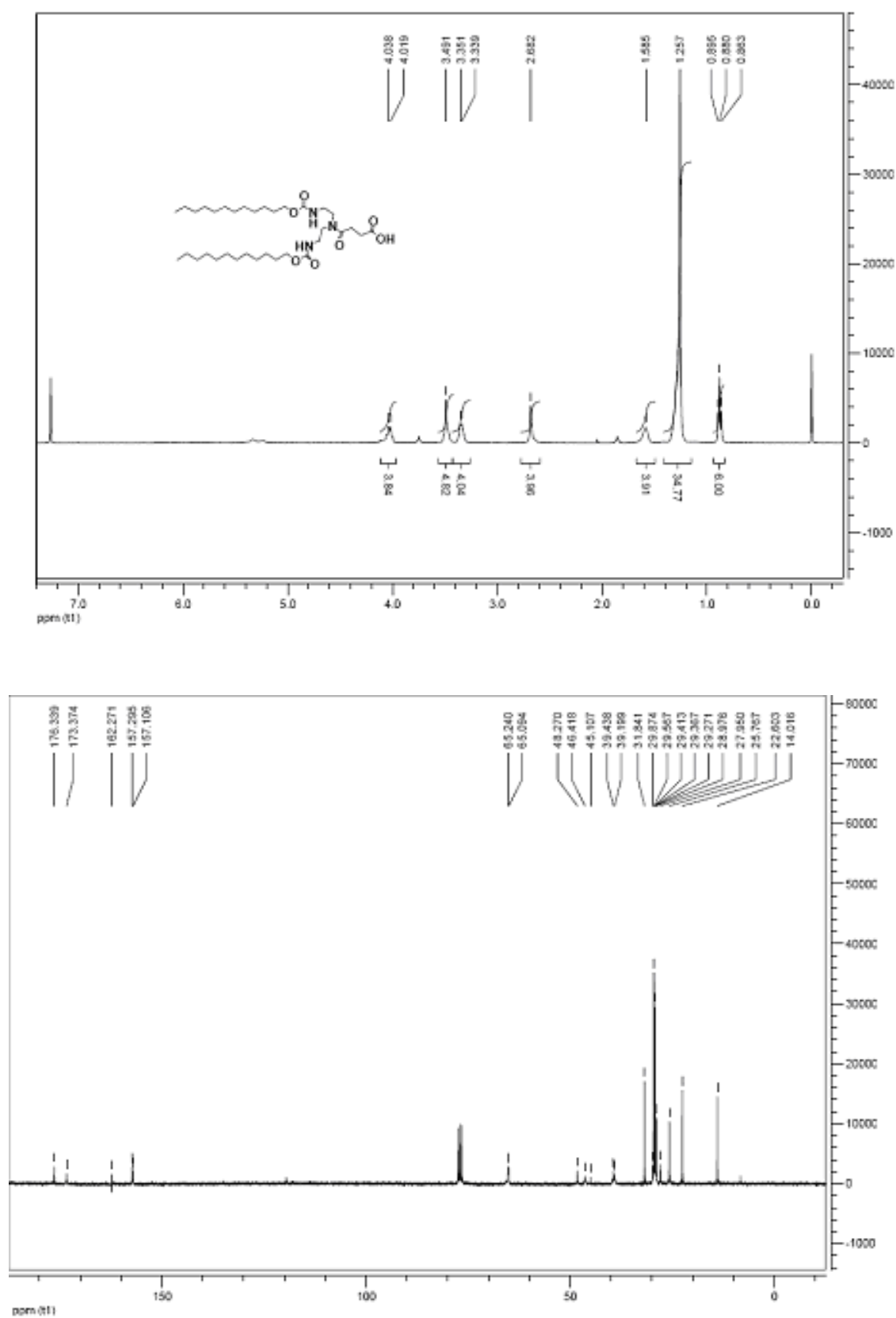


Fig S3 ¹H NMR and ¹³C NMR of LD0-COOH (3)

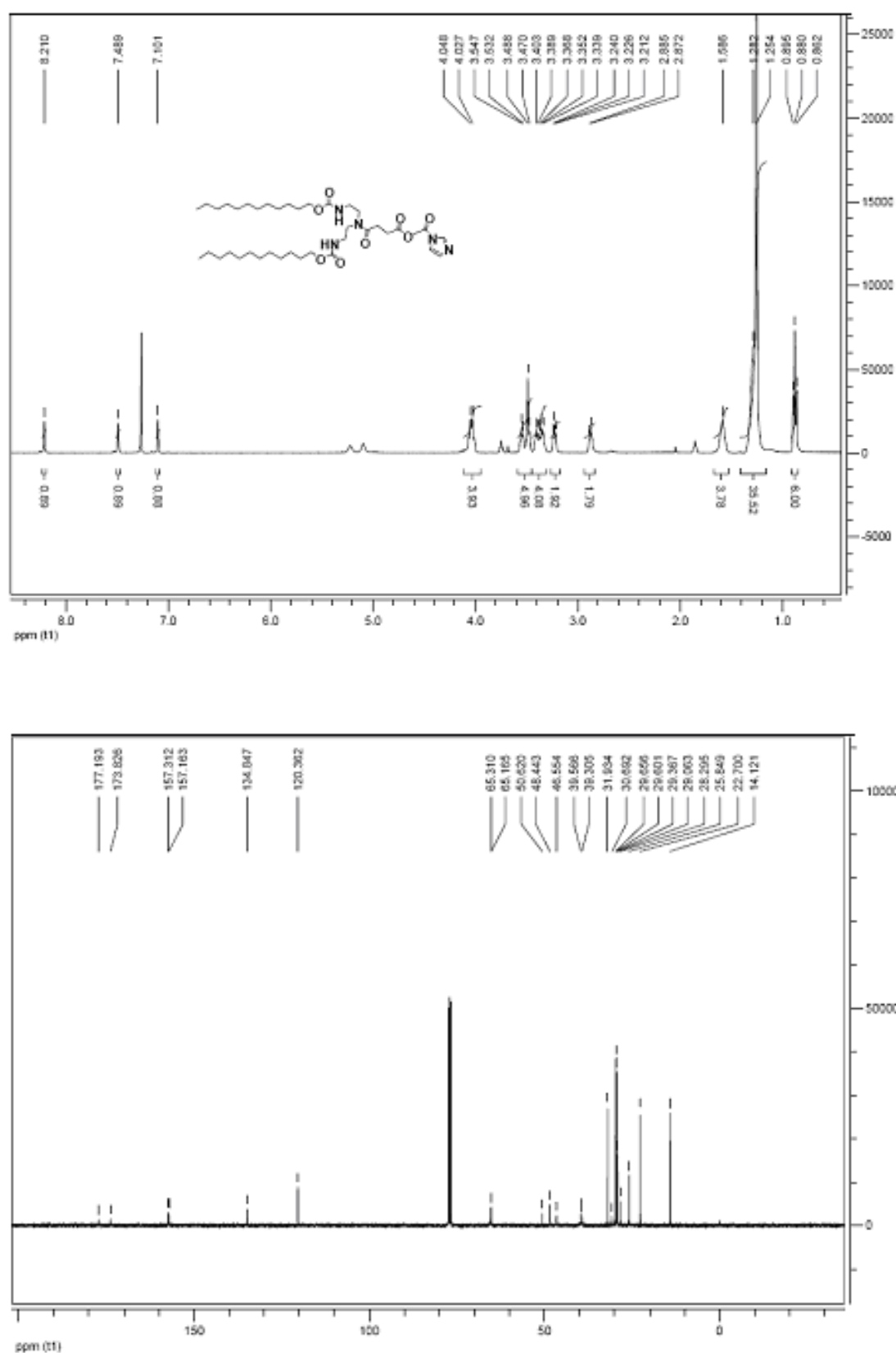


Fig S4 ¹H NMR and ¹³C NMR of LD0-CDI (4)

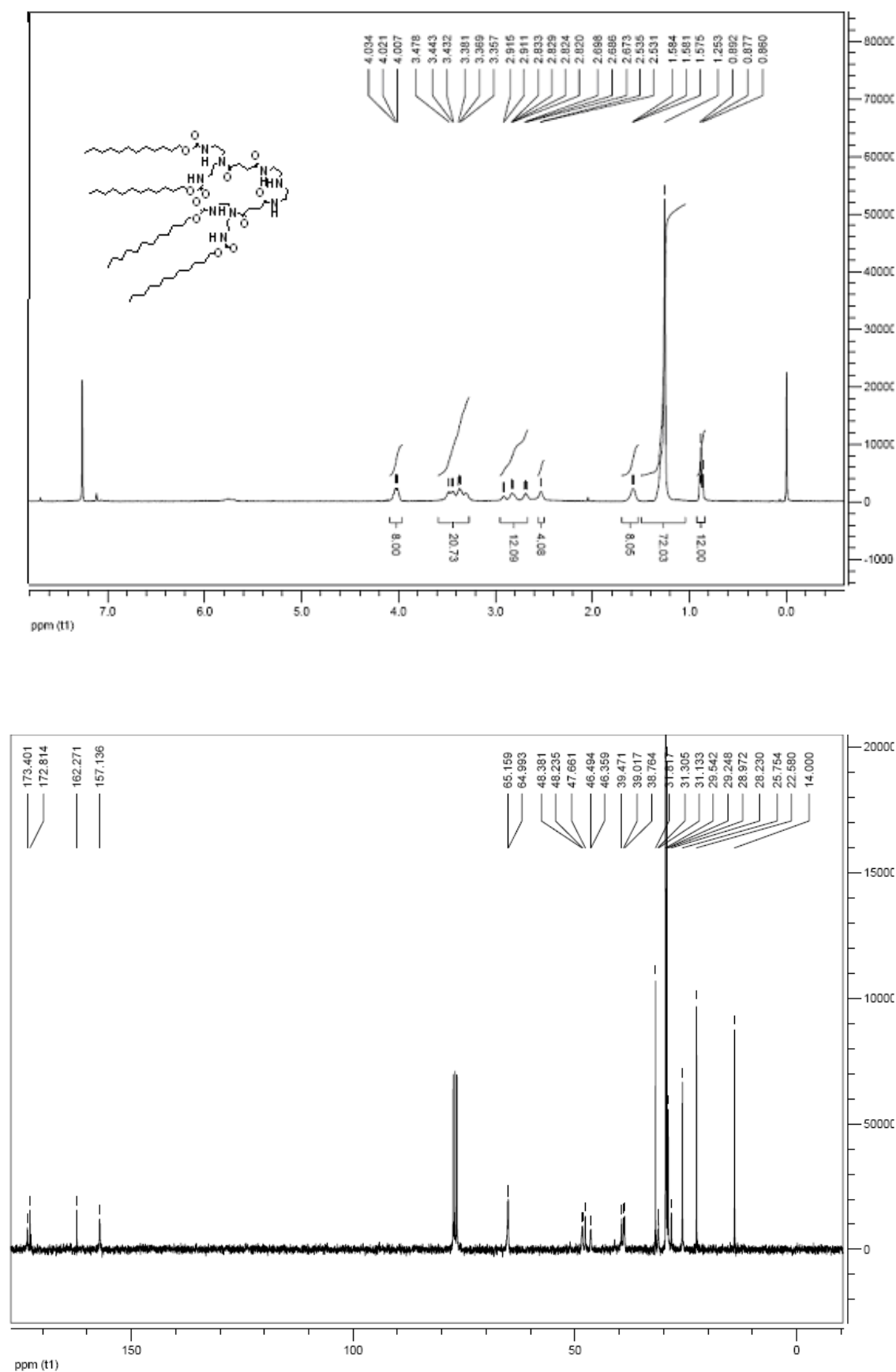


Fig S5 ¹H NMR and ¹³C NMR of LD1 (5)

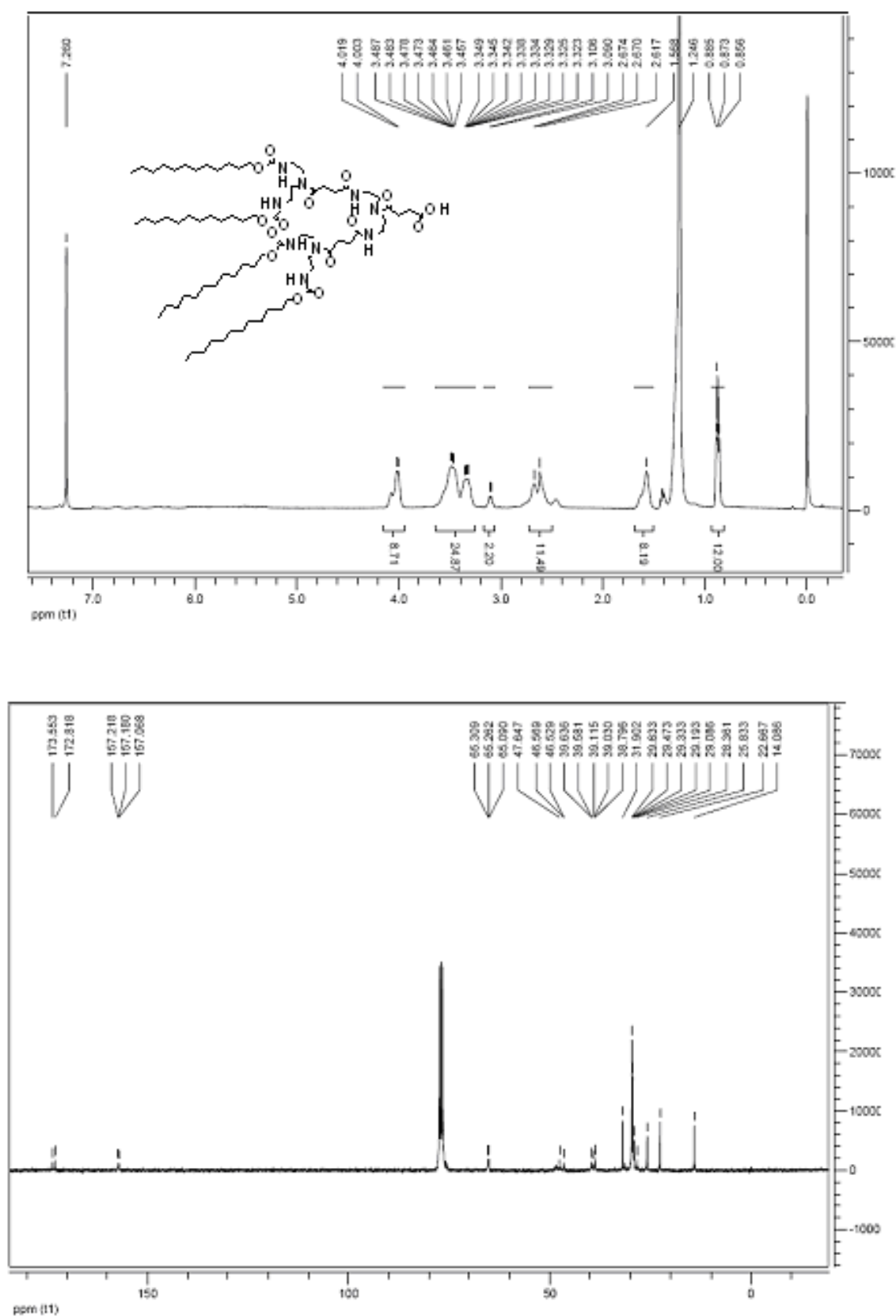


Fig S6 ¹H NMR and ¹³C NMR of LD1-COOH (6)

Cytotoxicity study: The cytotoxicity of LD1-PEI was evaluated by MTT assay. NIH 3T3 cells (a kind of normal mouse fibroblast cell lines) were seeded in 96-well plate at a density of 1×10^4 cells per well. After 24 h, the culture medium was replaced with 100 μ L fresh DMEM containing various concentrations of LD1-PEI or PEI, and the mixture was further incubated for 24 h. Fresh culture medium without samples was used as control. Each concentration was replicated in six wells. After an additional 24 h, the mixture was replaced with 100 μ L fresh DMEM, and 20 μ L MTS was added to each well, then the cells were incubated further for 1 h. The optical density (OD) was then measured at 490 nm on an ascent plate reader. The optical Cell viability (%) = $(OD_{\text{sample}}/OD_{\text{control}}) \times 100\%$.

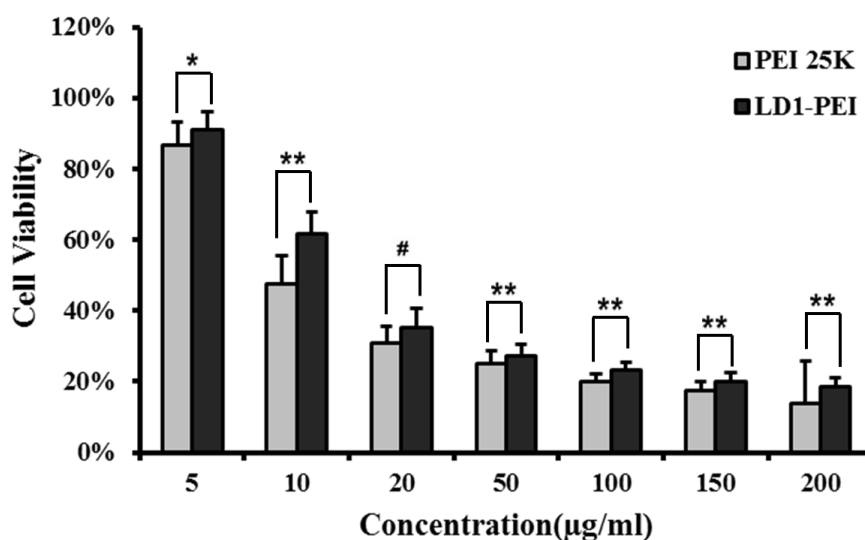


Fig S7 Cytotoxicity of LD1-PEI and PEI at various concentrations on NIH 3T3 cell lines, the concentration was 0, 5, 10, 50, 100, 150 and 200 μ g/mL respectively. Error bars represent standard deviations. ($n=6$, ** $p<0.01$, * $p<0.05$, # $p>0.05$)