

1. The variation of transmittance for poly(amido amine) without disulfide bond with temperature.

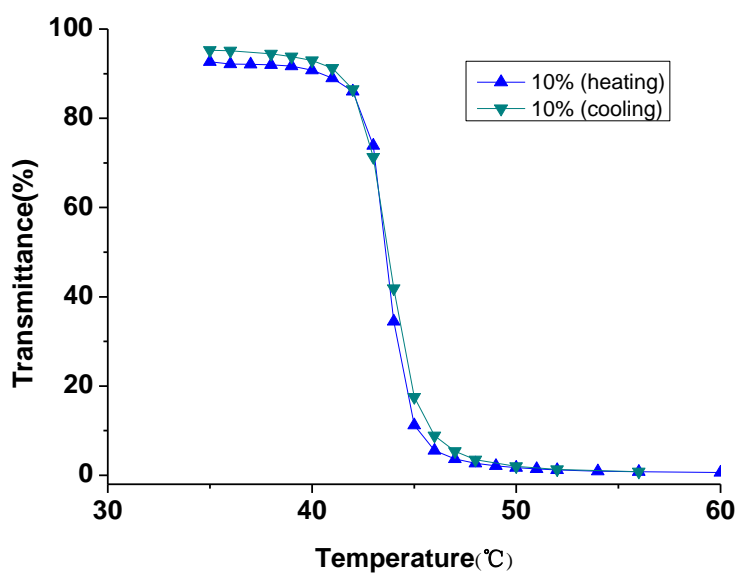


Figure S1

2.  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR spectra of disulfide-contained poly(amido amine)

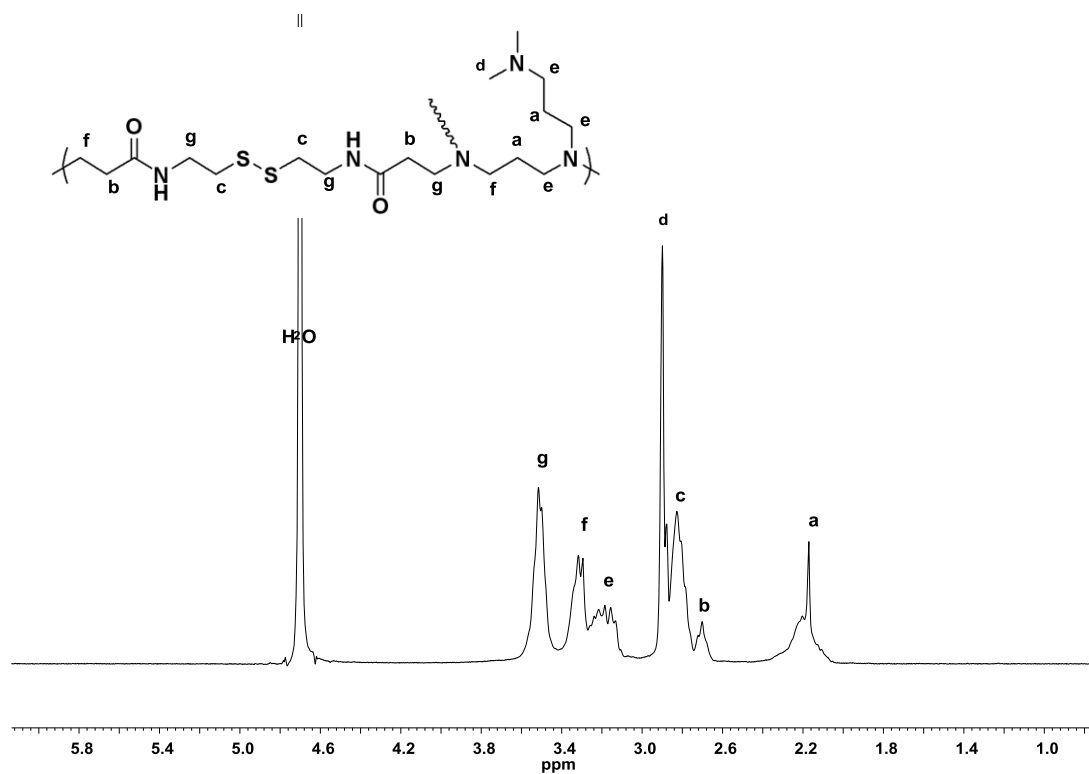


Figure S2

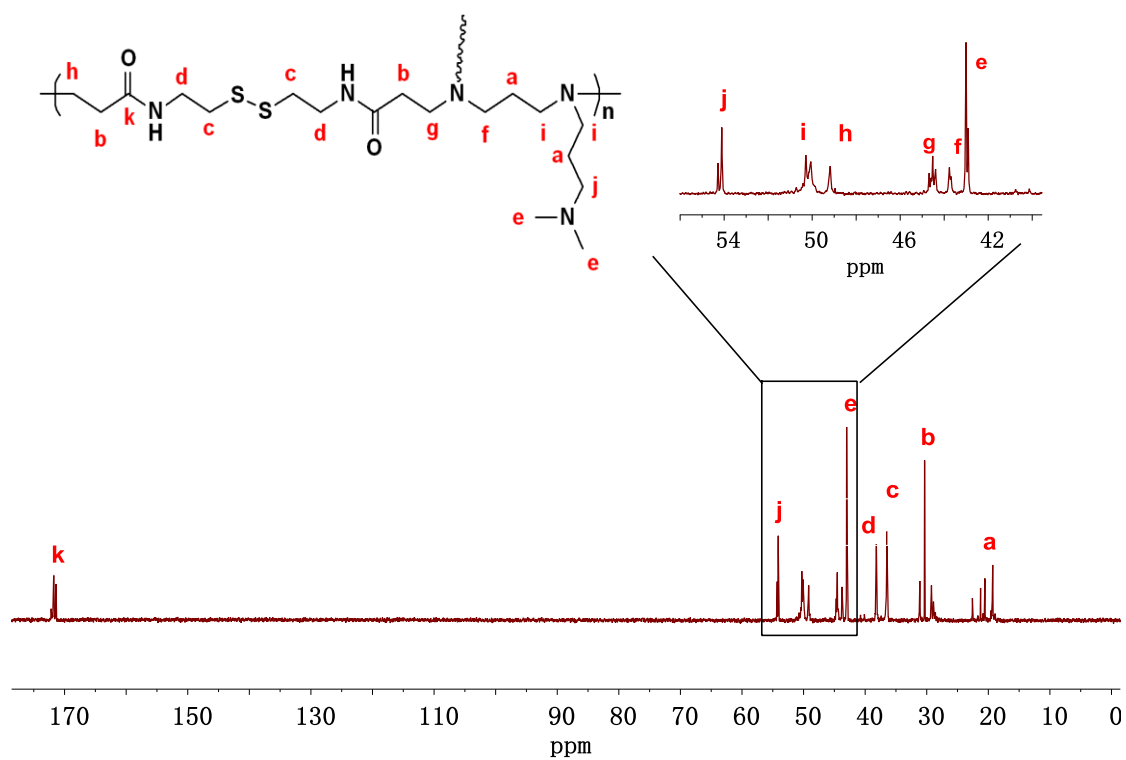


Figure S3

3. The size change of non-disulfide-contained hyperbranched poly(amido amine) polyplex with the time of heating.

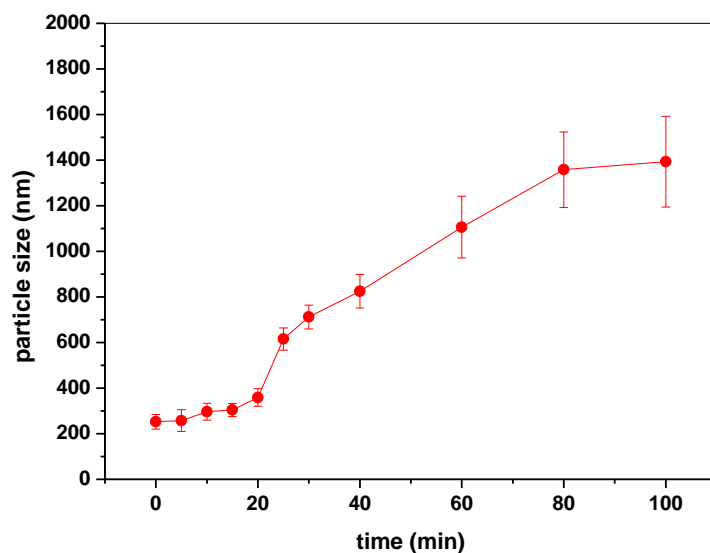


Figure S4

4. Transfection activity of polyplexes of non-reducible control (control hyperbranched poly(amido amine) without disulfides) in COS-7 cells at different cross-linking time with 10% serum

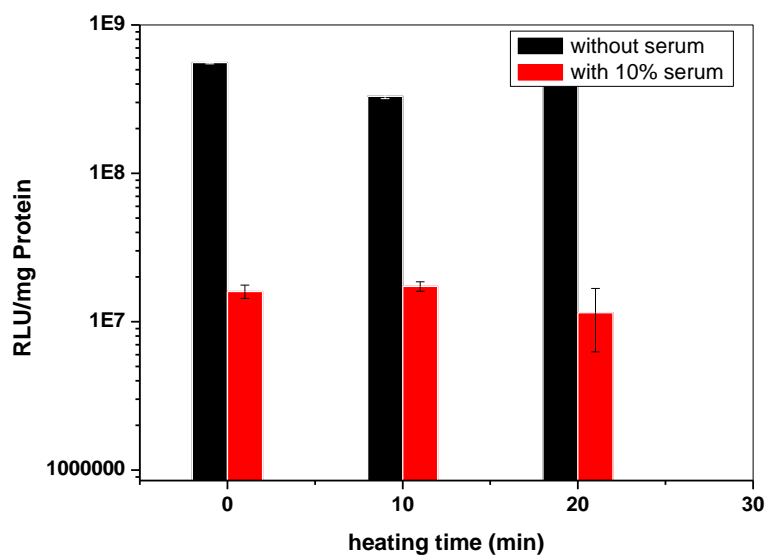


Figure S5

5. Transfection efficiency of both cross-linked and non-cross-linked polyplexes at the N/P ratio of 20, 30 and 40 in CHO cells with 50% serum.

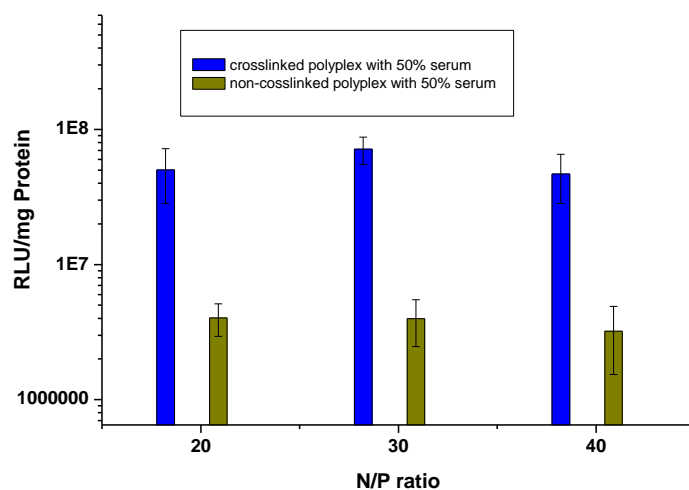


Figure S6