

Supporting Information

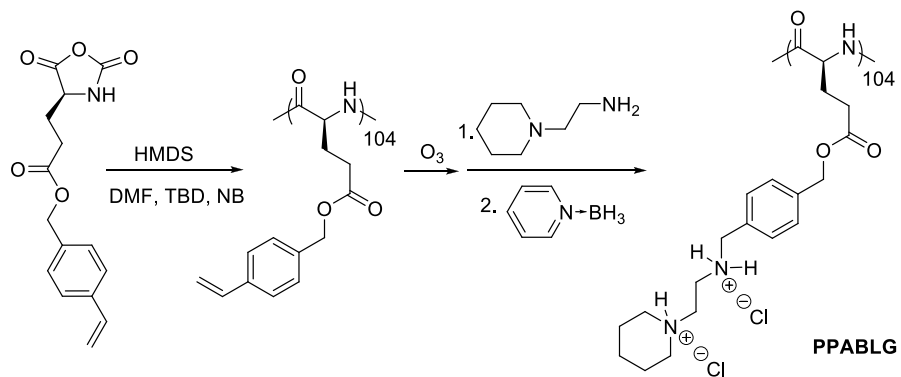
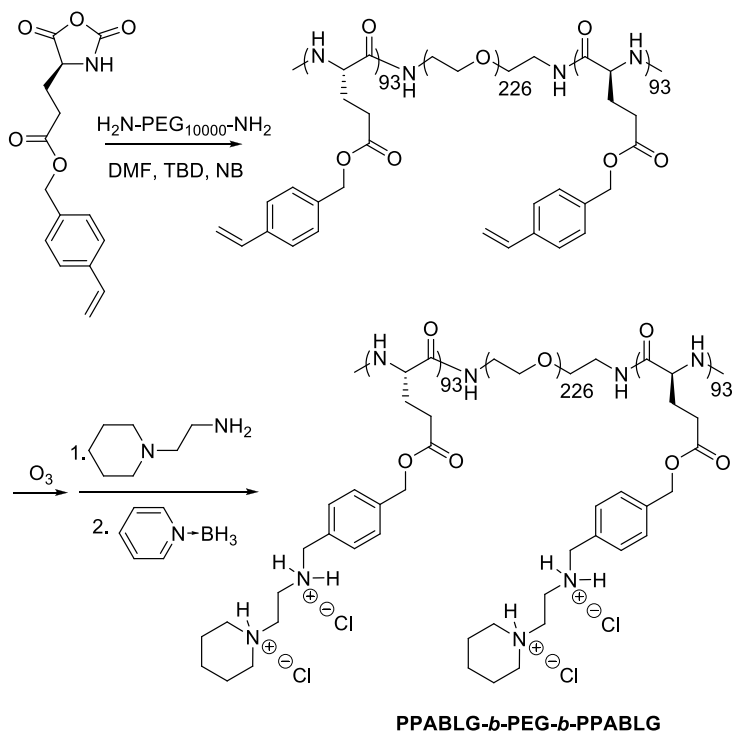
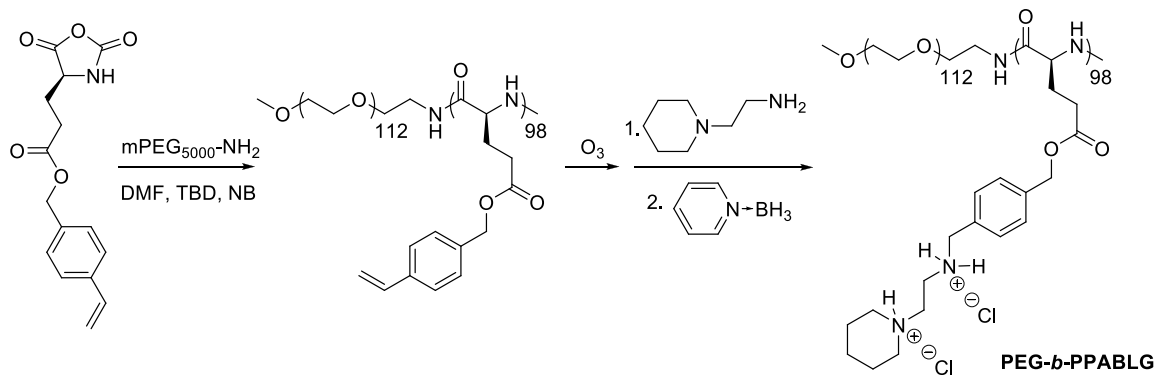
Reconfiguring the architectures of cationic helical polypeptides to control non-viral gene delivery

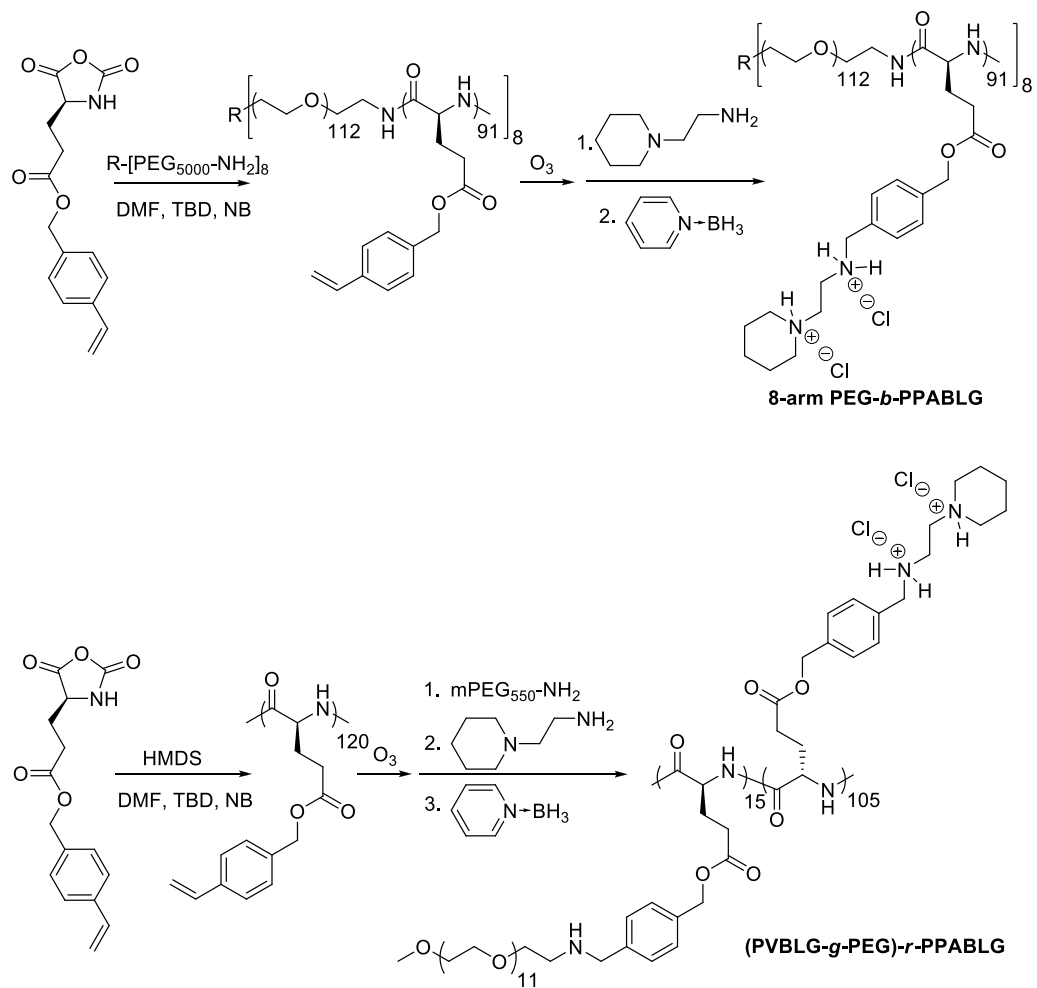
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Scheme S1. Synthetic routes of polypeptides with different architectures.

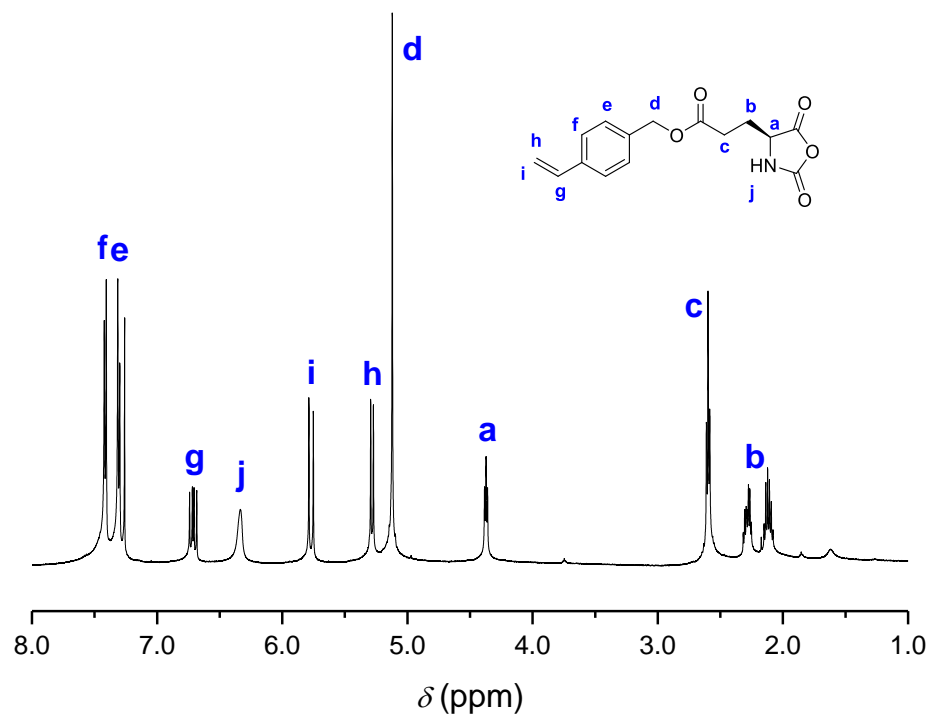


Fig. S1. ^1H NMR spectrum of VB-L-glu-NCA monomer in CDCl_3 .

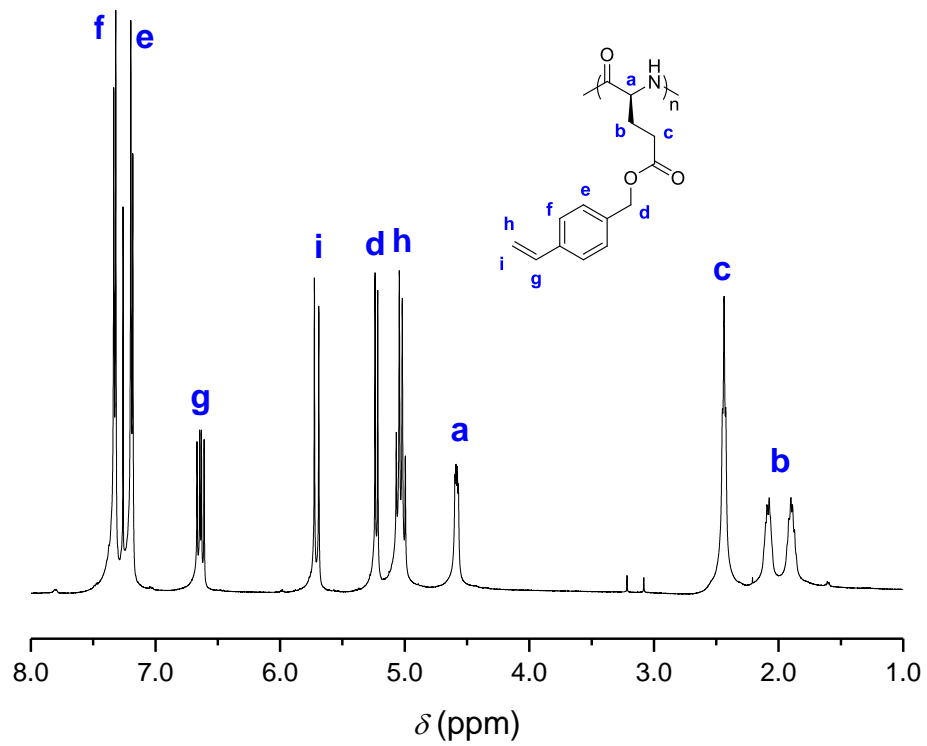


Fig. S2. Representative ¹H NMR spectrum of PVBLG precursor in CDCl₃/TFA-*d* (85:15, v/v).

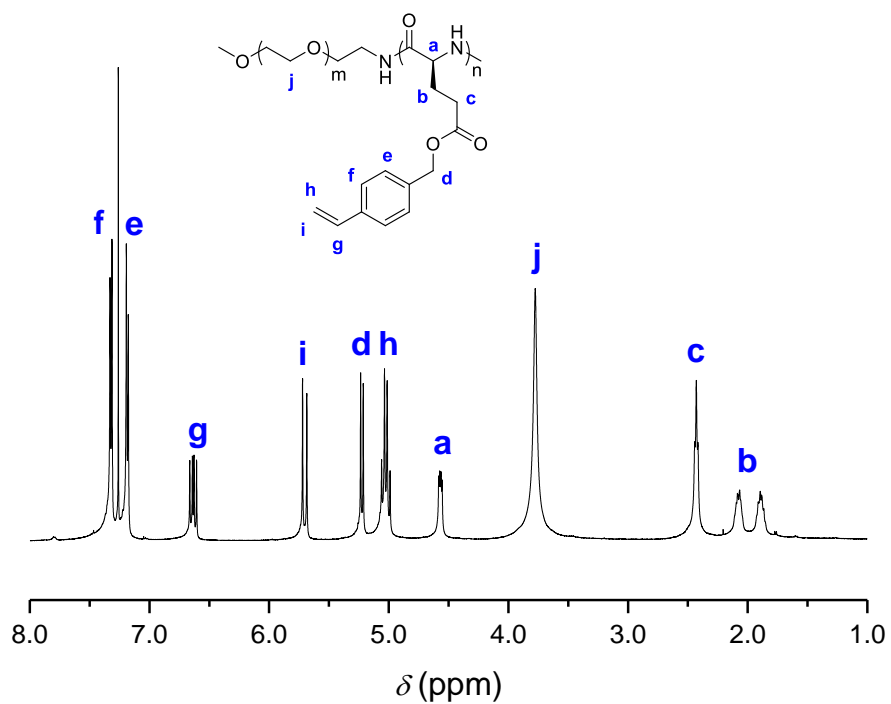


Fig. S3. Representative ¹H NMR spectrum of PEG-PVBLG conjugates precursor in CDCl₃/TFA-*d* (85:15, v/v). The copolymer composition was calculated by the integral ratio of PEG methylene protons (peak **j**) to the benzylic ester protons (peak **d**).

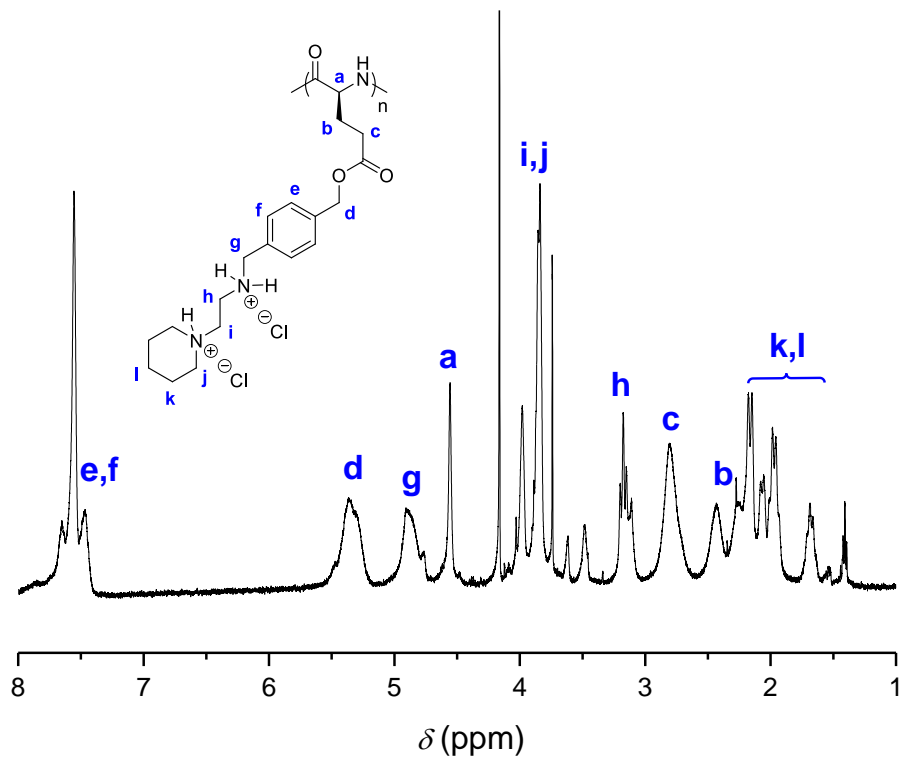


Fig. S4. ^1H NMR spectrum of PPABLG homopolymer in TFA-d .

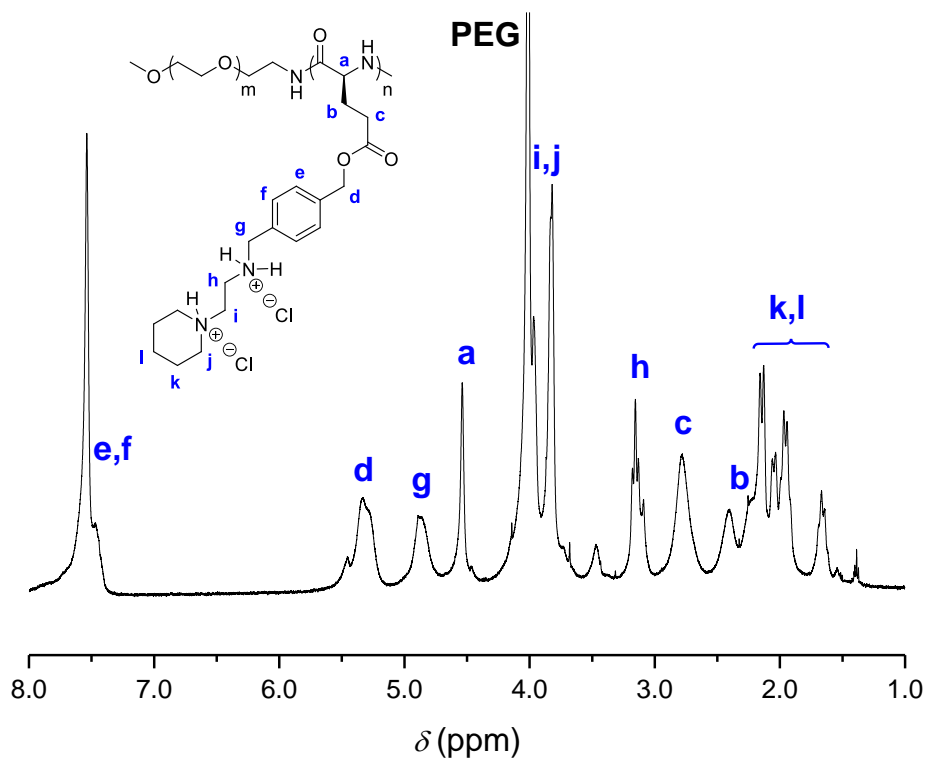


Fig. S5. ^1H NMR spectrum of PEG-*b*-PPABLG diblock copolymer in $\text{TFA-}d$.

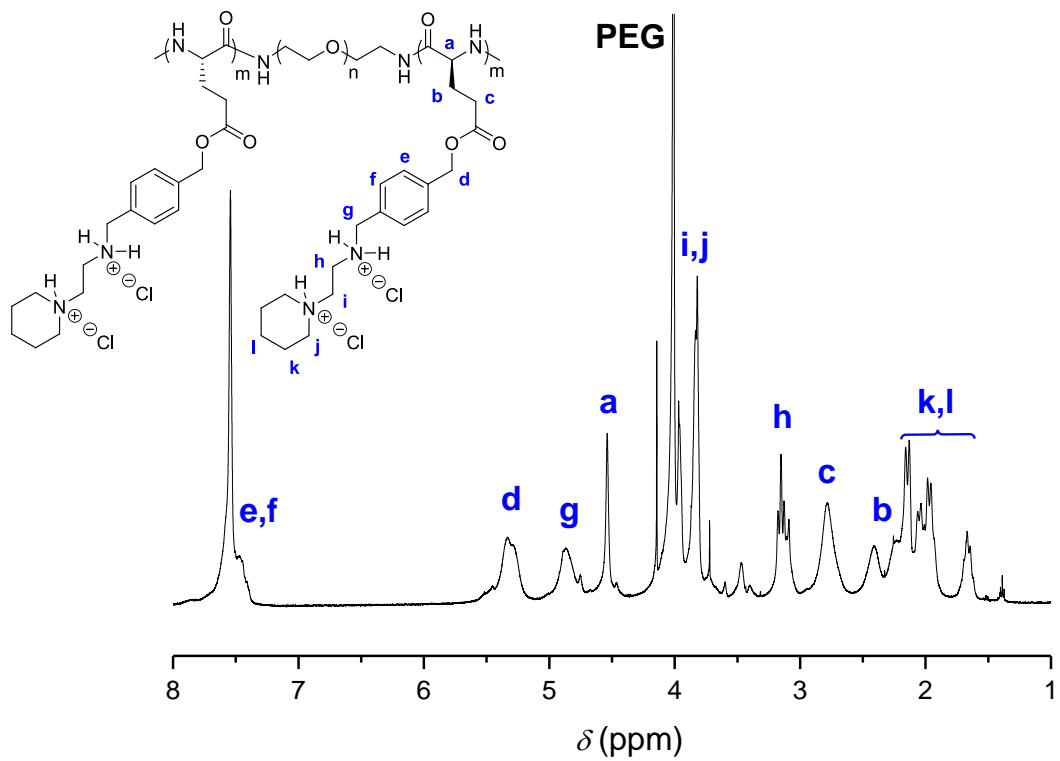


Fig. S6. ^1H NMR spectrum of PPABLG-*b*-PEG-*b*-PPABLG triblock copolymer in TFA-*d*.

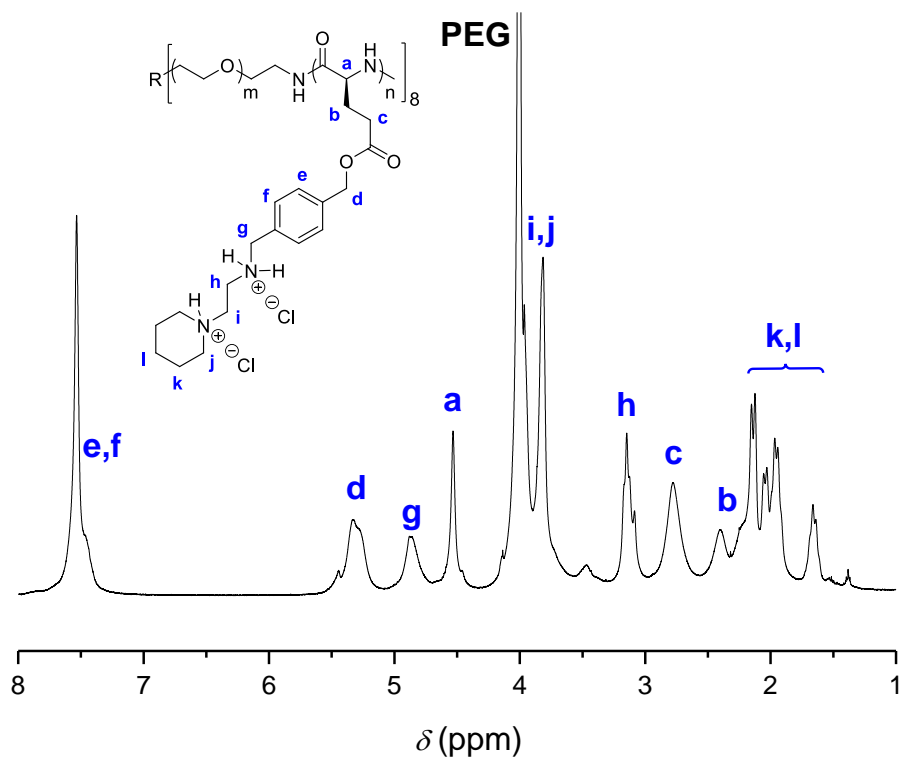


Fig. S7. ^1H NMR spectrum of 8-arm PEG-*b*-PPABLG star copolymer in TFA-*d*.

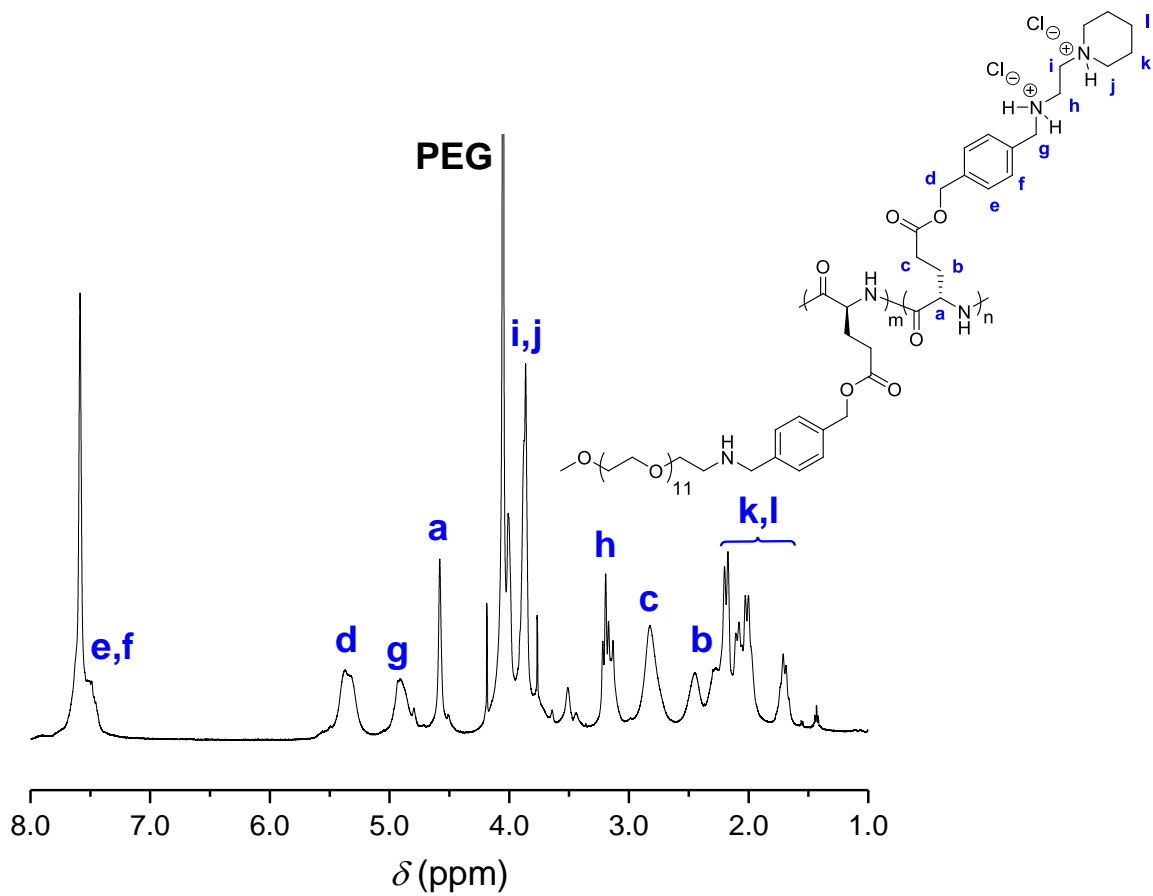


Fig. S8. ^1H NMR spectrum of (PVBLG-*g*-PEG)-*r*-PPABLG graft copolymer in TFA-*d*.