DNA loop sequence as the determinant for chiral supramolecular compound G-quadruplex selectivity

Haijia Yu[1], Chuanqi Zhao[1], Yong Chen[2], Manliang Fu[1], Jinsong Ren[1] and Xiaogang Qu[1]*

Supporting Information

Table of contents

Table S1 IC_{50} values of M and P enantiomer on cell viability. K562 cells were treated by different concentrations of each enantiomer for 72 h. Three parallel wells were set for each of the treated or control groups. Cell viability was determined by MTT assay as our previously described in References 41 and 46 in the main text.

Compound	P enantiomer	M enantiomer
IC_{50} (μM)	55.2	59.6

Supporting Figures

Fig. S1 Native gel electrophoretic analysis (20% PAGE) of DNA oligonucletides in 1×TB buffer with 10 mM NaCl (A) or 10 mM KCl (B). Lane 1, T22; lane 2, hTel22; lane 3, hTel-1; lane 4, hTel-2; lane5, hTel-3; lane 6, hTel-4; lane7, hTel-5; lane8, hTel-6.

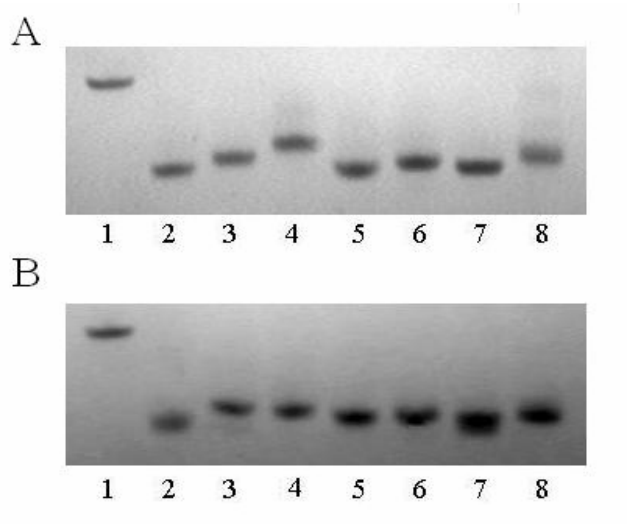

Fig. S2 CD spectra of human telomeric G-quadruplex and its analogues in 10 mM Tris buffer containing 100 mM NaCl (A) or 100 mM KCl (B), pH 7.2.

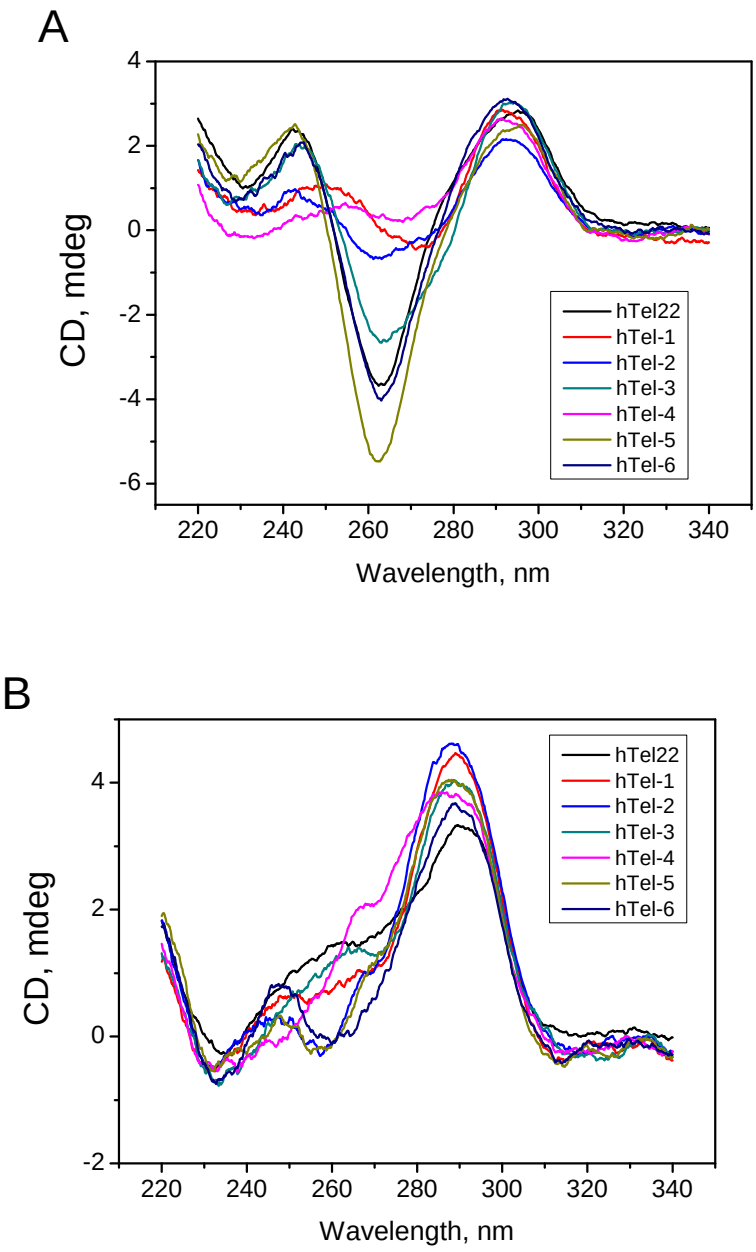

Fig. S3 UV melting profiles of DNA oligonucletides in 10 mM Tris buffer containing 100 mM NaCl (A) or 100 mM KCl (B), pH 7.2.

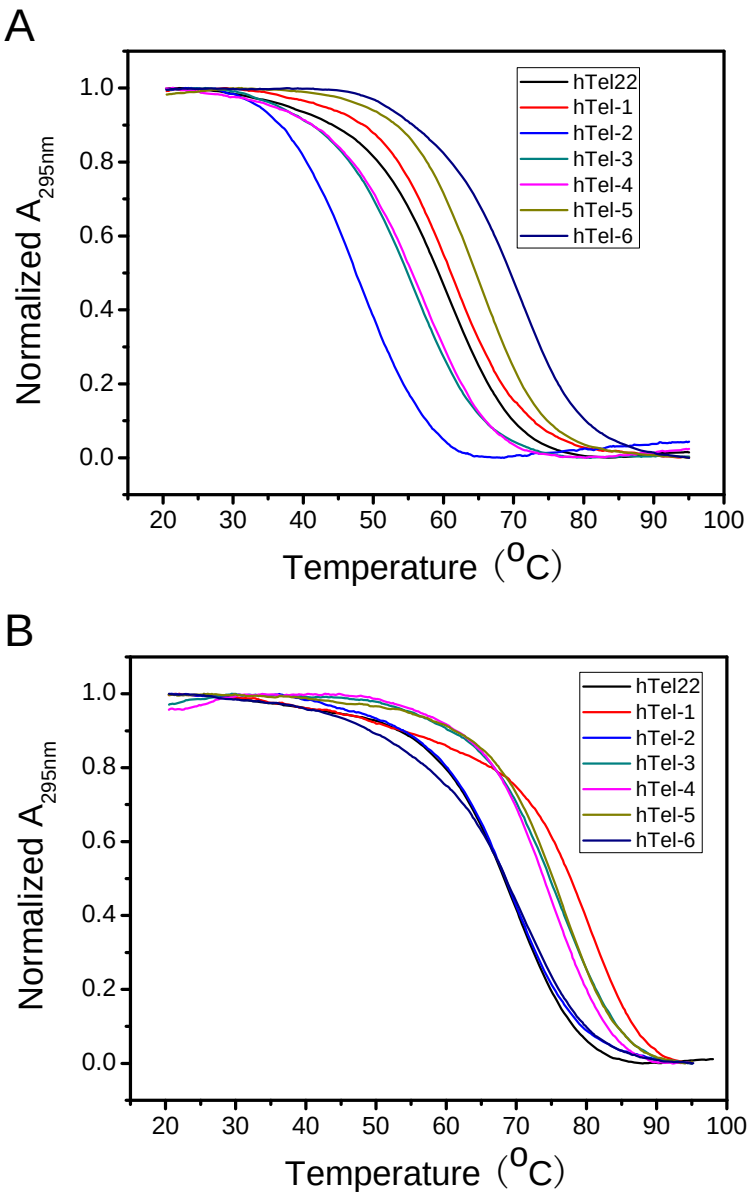

Fig. S4 CD spectra of hTel-1 (1 μM/strand) in the absence (black) or presence of 1 μM P enantiomer (red), 1 μM M enantiomer (blue) in 10 mM Tris buffer (pH 7.2) with 100 mM NaCl (A) or 100 mM KCl (B).

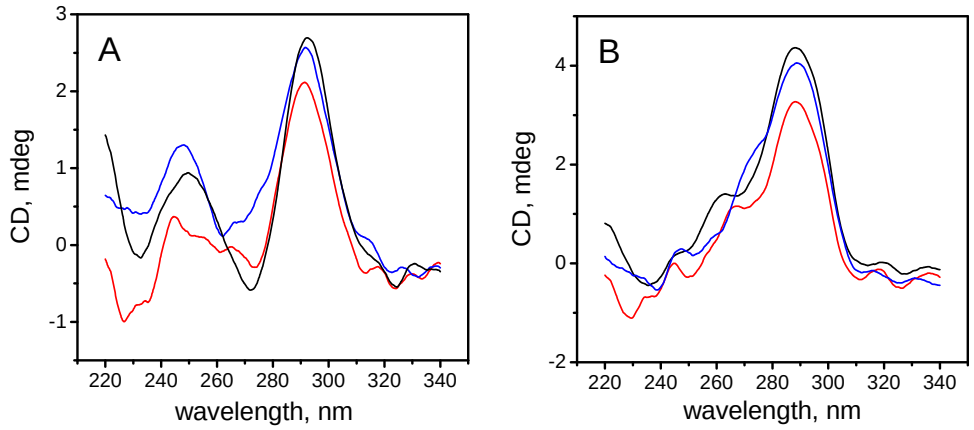

Fig. S5 CD spectra of hTel-2 (1 μM/strand) in the absence (black) or presence of 1 μM P enantiomer (red), 1 μM M enantiomer (blue) in 10 mM Tris buffer (pH 7.2) with 100 mM NaCl (A) or 100 mM KCl (B).

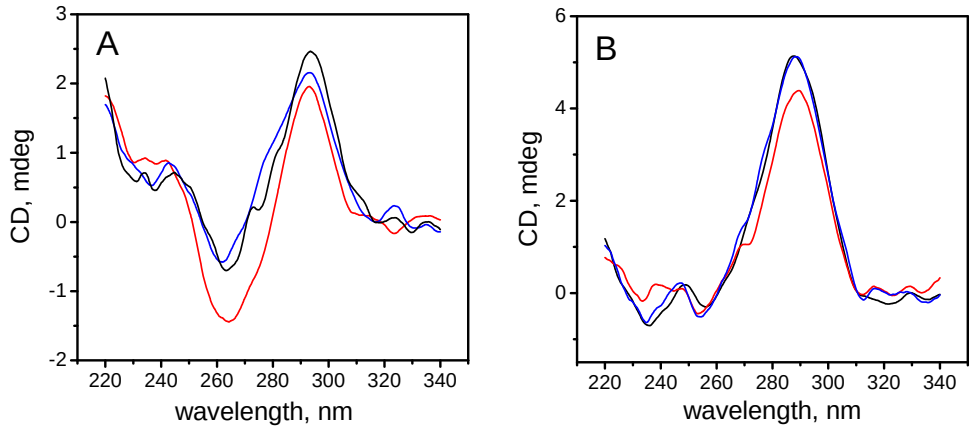

Fig. S6 CD spectra of hTel-3 (1 μM/strand) in the absence (black) or presence of 1 μM P enantiomer (red), 1 μM M enantiomer (blue) in 10 mM Tris buffer (pH 7.2) with 100 mM NaCl (A) or 100 mM KCl (B).

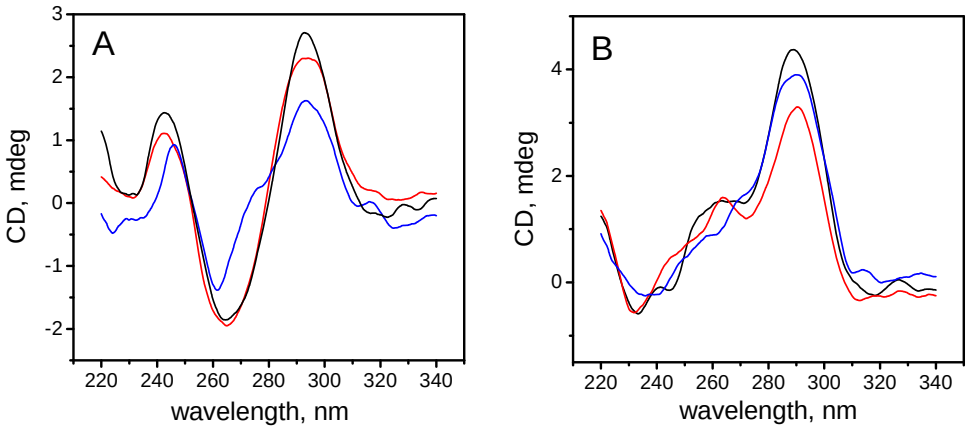

Fig. S7 CD spectra of hTel-4 (1 μM/strand) in the absence (black) or presence of 1 μM P enantiomer (red), 1 μM M enantiomer (blue) in 10 mM Tris buffer (pH 7.2) with 100 mM NaCl (A) or 100 mM KCl (B). CD spectra are obtained by individual background subtraction.

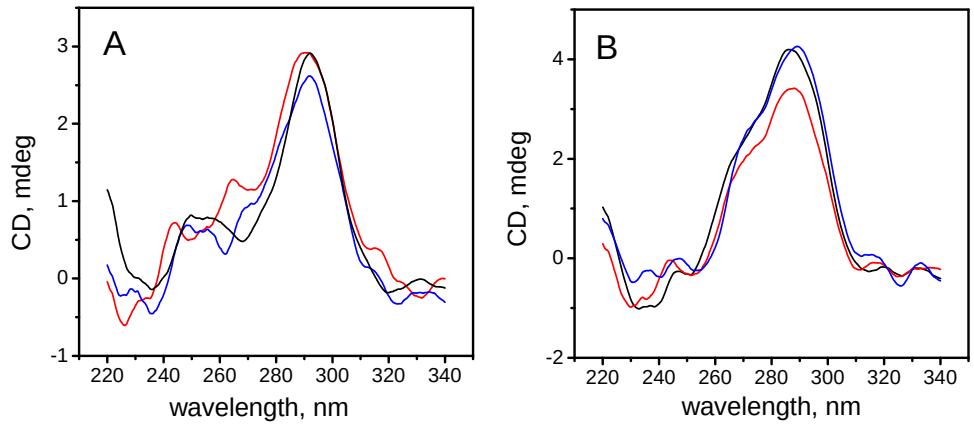

Fig. S8 CD spectra of hTel-5 (1 μM/strand) in the absence (black) or presence of 1 μM P enantiomer (red), 1 μM M enantiomer (blue) in 10 mM Tris buffer (pH 7.2) with 100 mM NaCl (A) or 100 mM KCl (B).

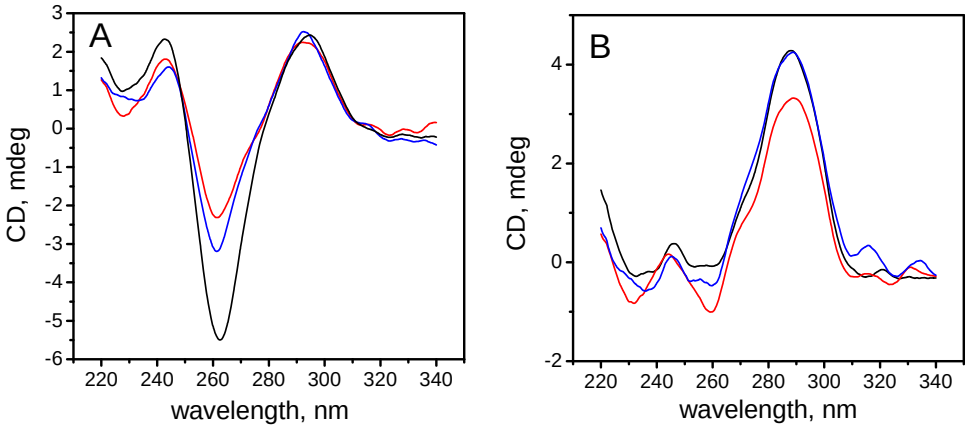

Fig. S9 CD spectra of hTel-6 (1 μM/strand) in the absence (black) or presence of 1 μM P enantiomer (red), 1 μM M enantiomer (blue) in 10 mM Tris buffer (pH 7.2) with 100 mM NaCl (A) or 100 mM KCl (B).