

Supporting Information

Enantiomeric recognition of chiral L- and D-penicillamine Zinc(II) complexes: DNA binding behavior and cleavage studies

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Figure Captions

Fig. S1. ^1H -NMR spectra of complexes (a) **1a** and (b) **1b**.

Fig. S2. ^{13}C -NMR spectra of complexes (a) **1a** and (b) **1b**.

Fig. S3. Absorption spectral traces of complex (a) **1a** and (b) **1b** in Tris-HCl upon the addition of 5'-GMP. [Complex] 6.66×10^{-6} M, [DNA] $0-2.0 \times 10^{-5}$ M.

Fig. S4: Absorption spectral traces of complex (a) **1a** and (b) **1b** in Tris-HCl upon the addition of 5'-TMP. [Complex] 6.66×10^{-6} M, [DNA] $0-2.0 \times 10^{-5}$ M.

Fig. S5: ^1H NMR spectrum of (a) 5'-GMP (5 mmol) and 5'-GMP with complex **1a** (2.5 mmol) (b) 5'-TMP (5 mmol), 5'-TMP with complex **1a** (2.5 mmol) at 25°C.

Fig. S6: ^{31}P NMR spectrum of (a) 5'-GMP (5 mmol) and 5'-GMP with complex **1a** (2.5 mmol) (b) 5'-TMP (5 mmol) and 5'-TMP with complex **1a** (2.5 mmol) at 25°C.

Fig. S7. Stern-Volmer quenching plots with $\text{K}_4[\text{Fe}(\text{CN})_6]$ of complex **1a** in the absence ($\square$) and presence ($\blacksquare$) of CT DNA and complex **1b** in the absence ($\circ$) and presence ($\bullet$) of CT DNA.

Fig. S8. The cleavage patterns of the agarose gel electrophoresis for pBR322 plasmid DNA (300 ng) by complex (a) **1a** at 310 K after 45 min of incubation in buffer (5mM Tris-HCl/50 mM NaCl, pH= 7.2), Lane 1, DNA control; Lane 2, DNA+**1a** (20 μM); Lane 3, DNA+**1a** (25 μM); Lane 4, DNA+**1a** (30 μM); Lane 5, DNA+**1a** (35 μM); (b) **1b** at 310 K after 45 min of incubation in buffer (5mM Tris-HCl/ 50 mM NaCl, pH= 7.2), Lane 1, DNA control; Lane 2, DNA+**1b** (20 μM); Lane 3, DNA+**1b** (25 μM); Lane 4, DNA+**1b** (30 μM); Lane 5, DNA+**1b** (35 μM).

Figures

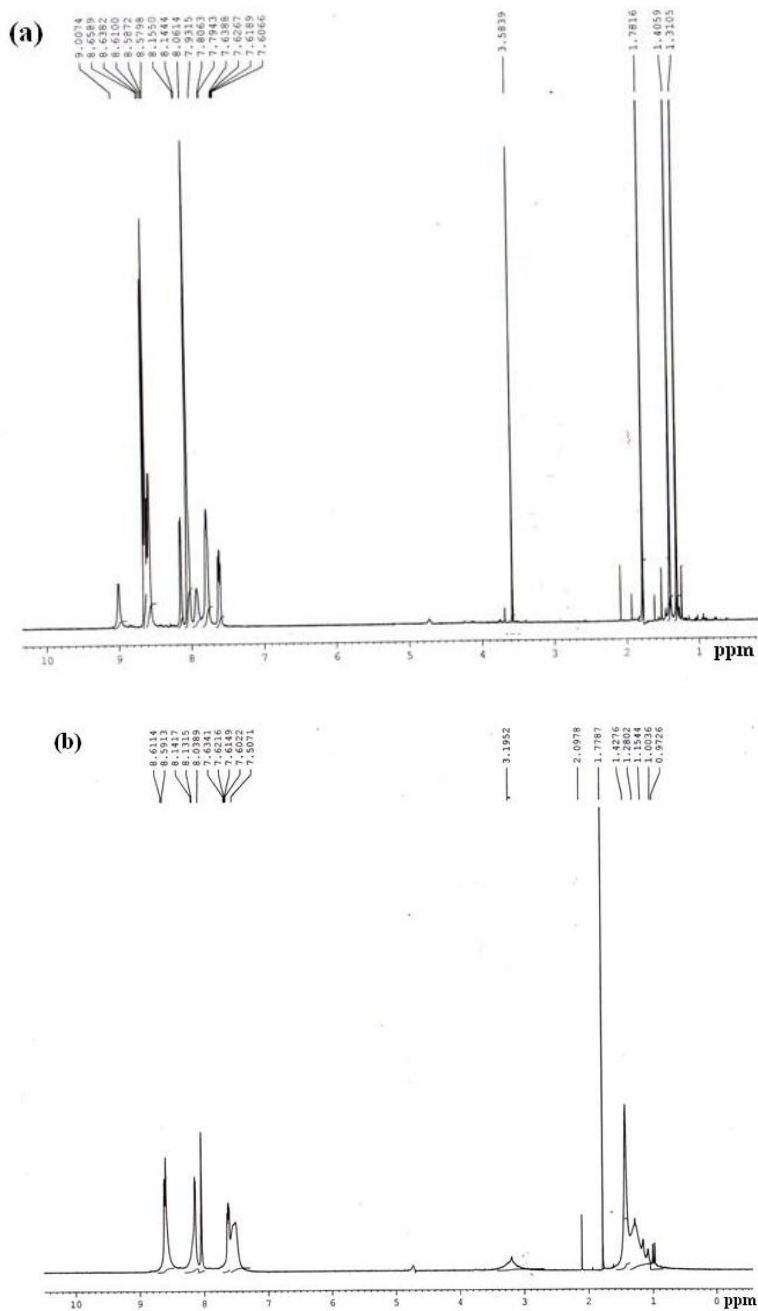


Fig. S1

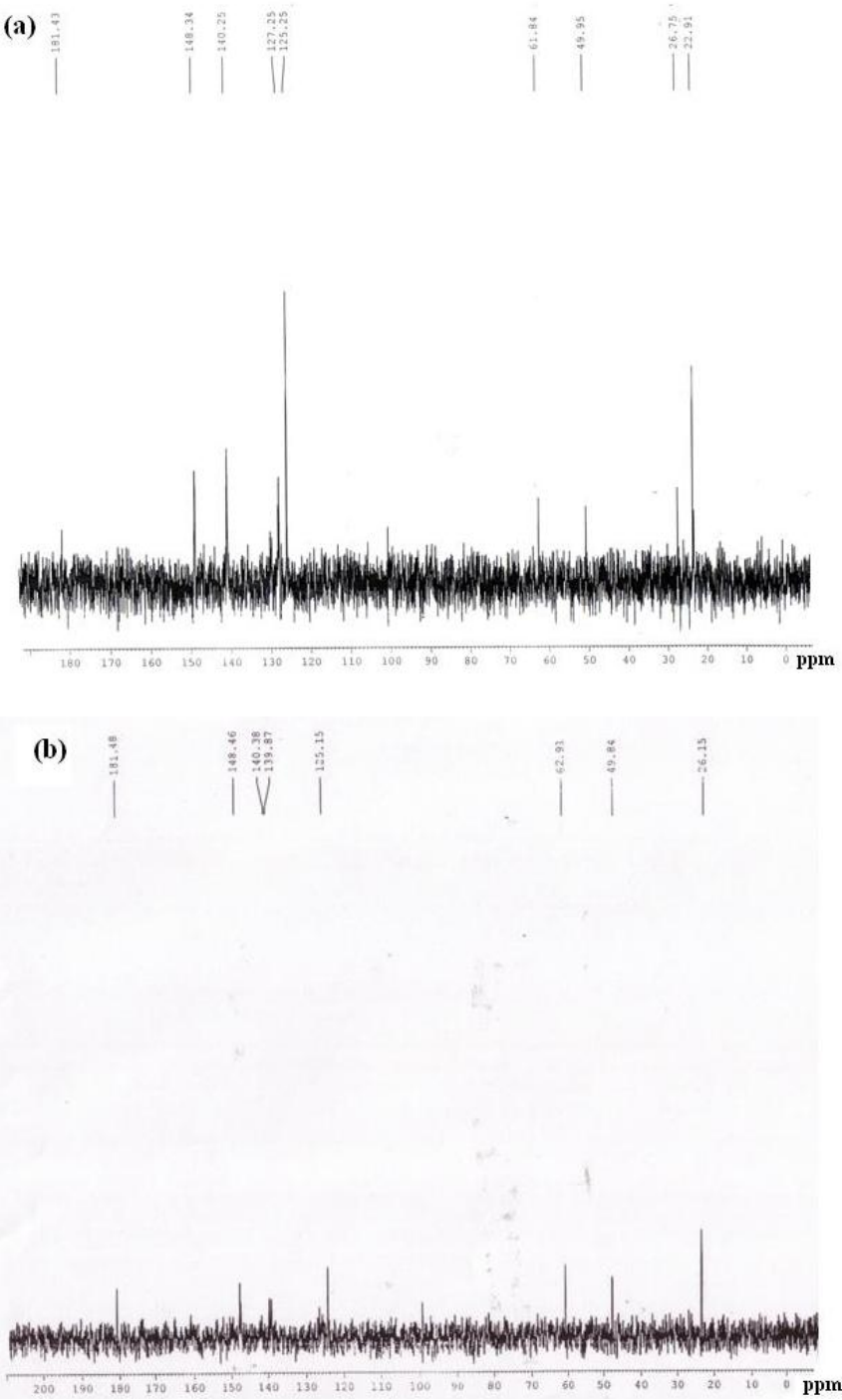


Fig. S2

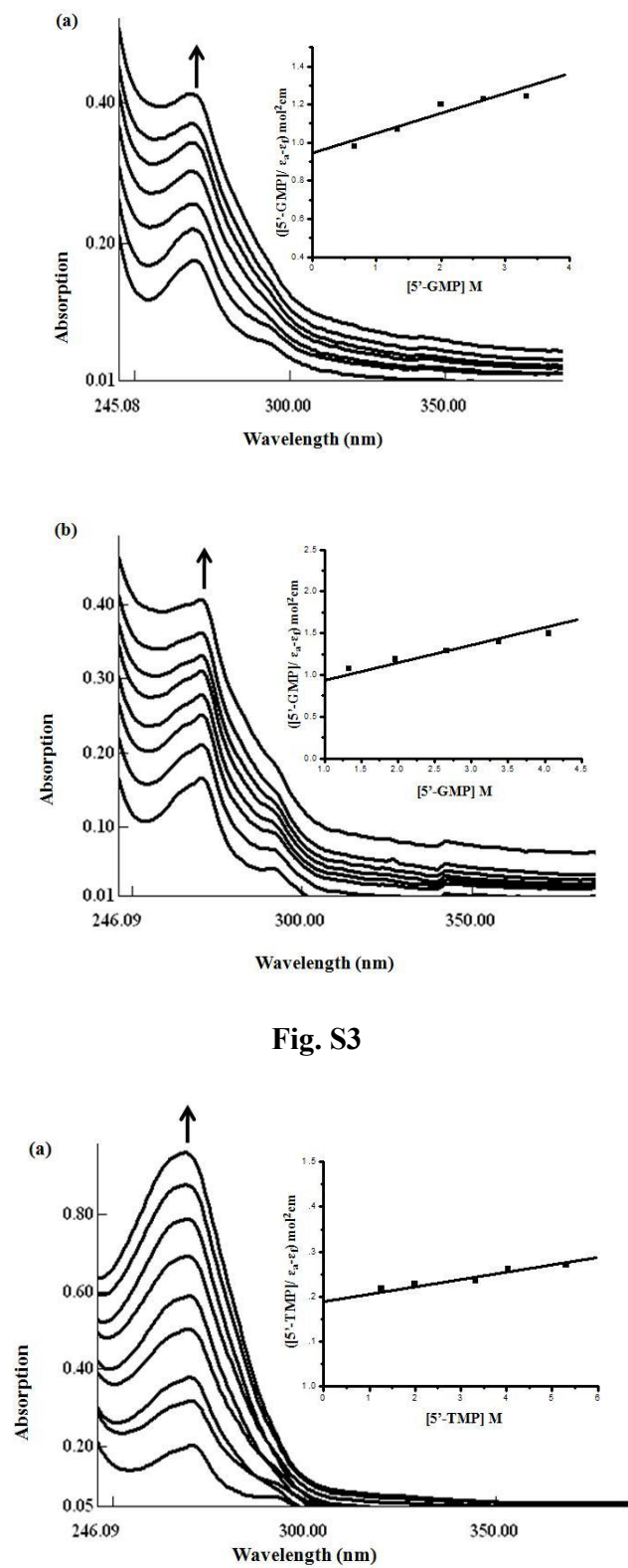


Fig. S3

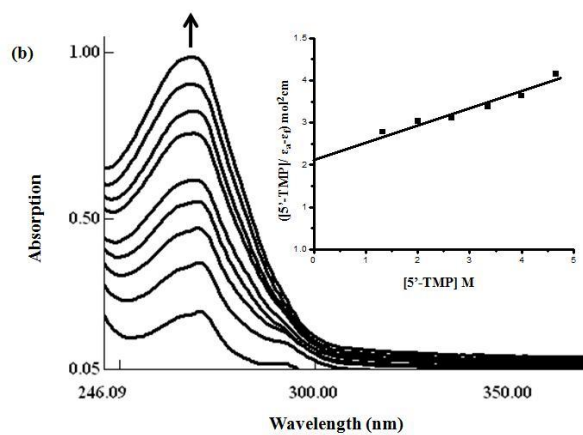


Fig. S4

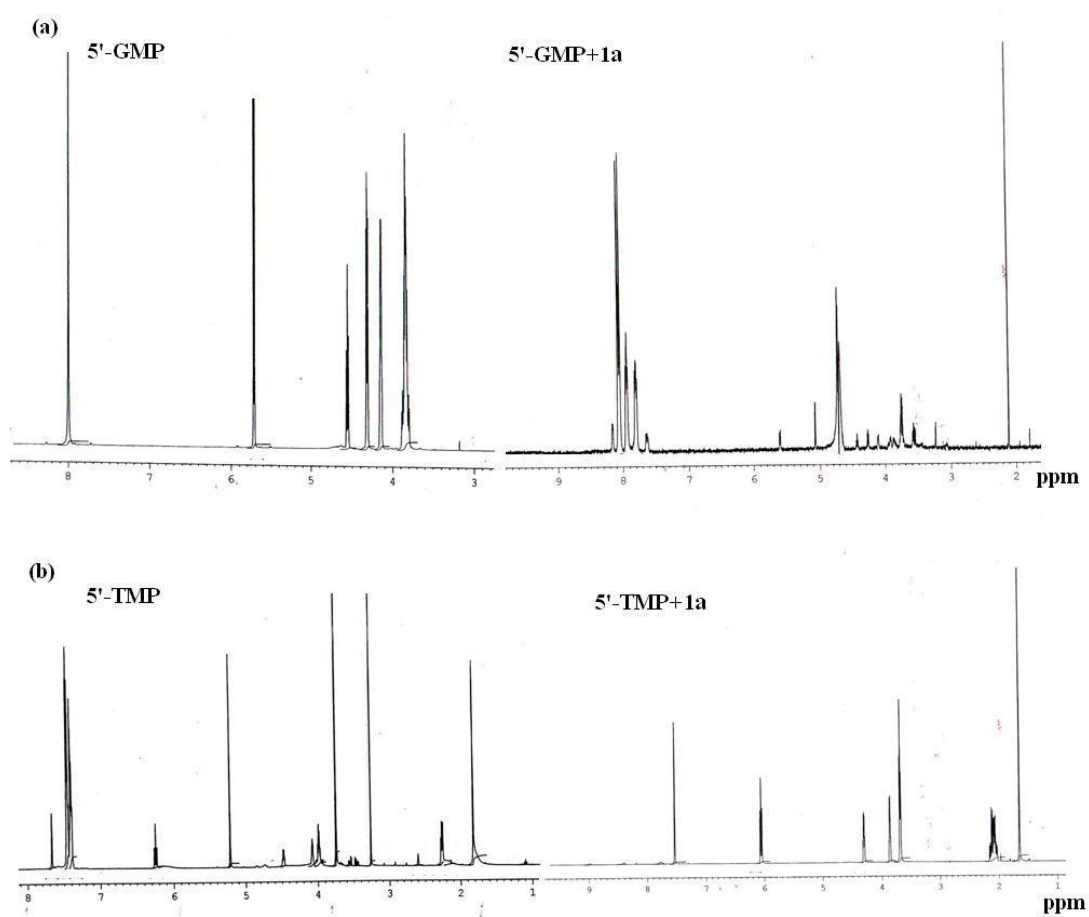


Fig. S5

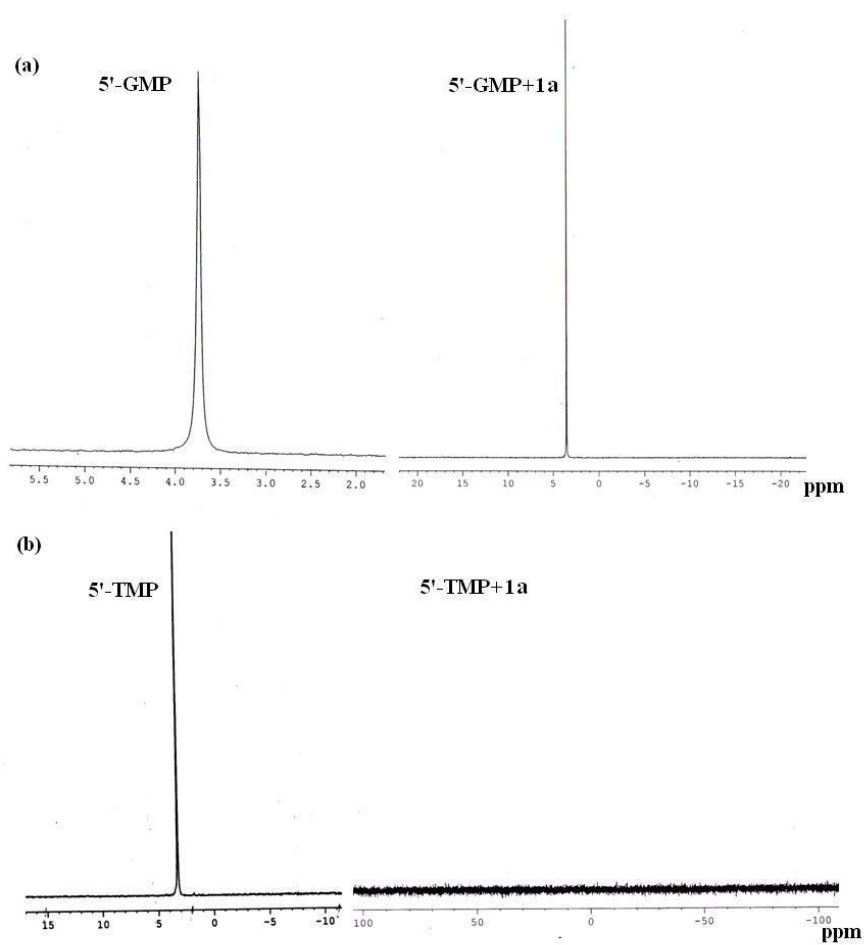


Fig. S6

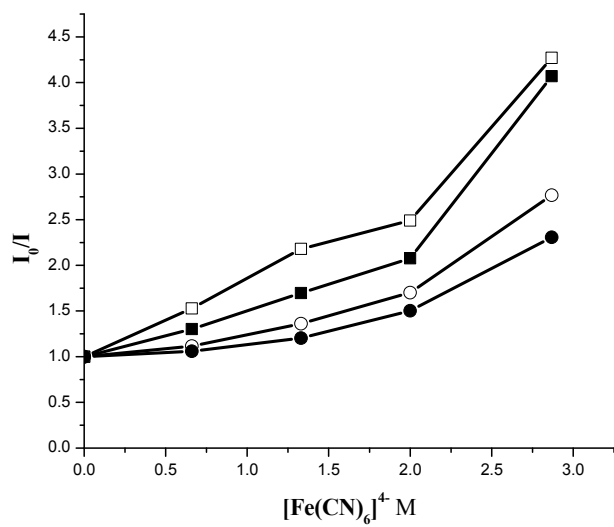
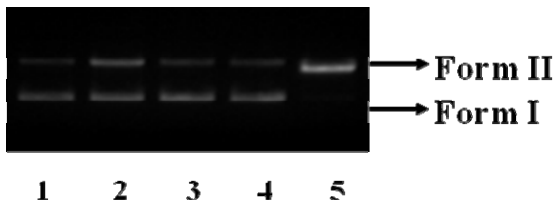
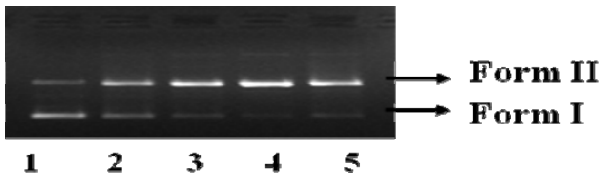


Fig. S7



(a)



(b)

Fig. S8