

**SUPPLEMENTARY FIG. S2.** Osmium tetroxide (OsO<sub>4</sub>) probing of PNA-hairpin complexes. Hairpin DNA with (lane 2) or without (lane 1) G<sub>4</sub>T<sub>4</sub>G<sub>4</sub> PNA was probed with OsO<sub>4</sub> that reacts with thymidines in single-stranded regions. The results show that only thymidine in the loop (marked with *bracket*) are reactive proving that PNA binging does not result in unwinding of the hairpin's DNA stem.