

Electronic Supplementary Information (ESI)

Duplex DNA-gold nanoparticle probe composed as colorimetric biosensor for sequence-specific DNA-binding protein

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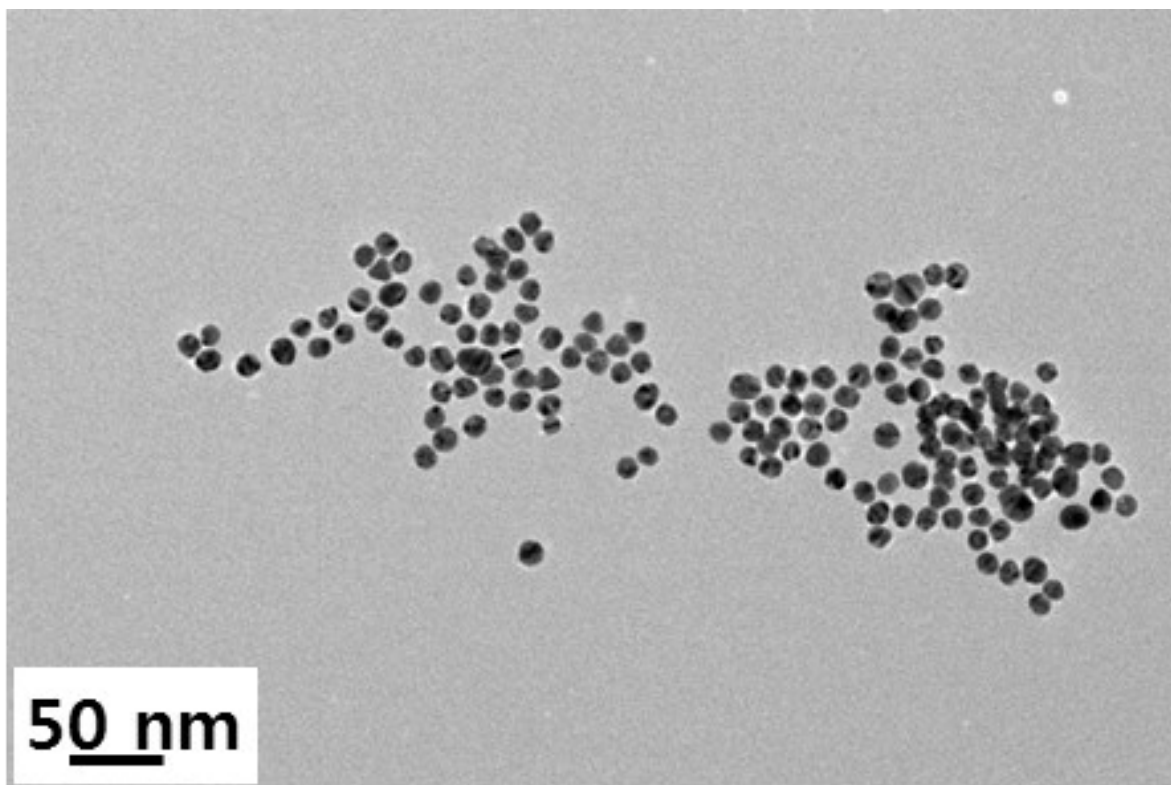


Fig. S1 TEM image of DNA-Au-2.

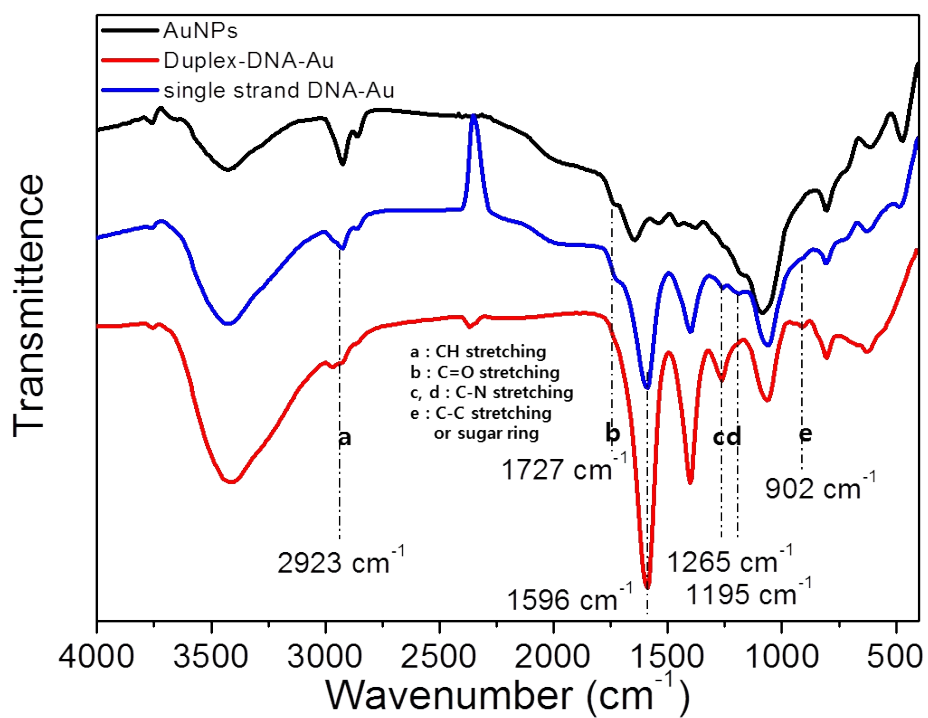


Fig. S2 IR spectra of Au, DNA-Au, and duplex DNA-Au.

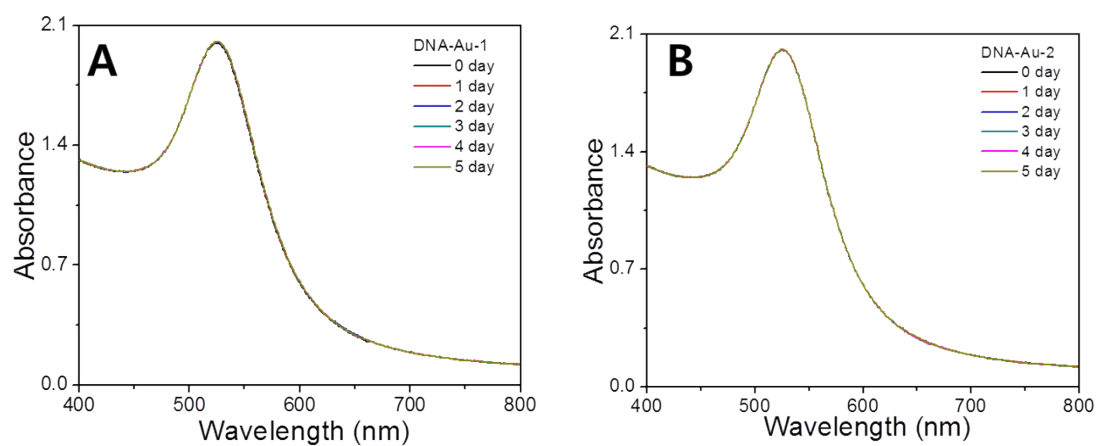


Fig. S3 Time dependent measurements of UV-Vis spectra of (A) **DNA-Au-1**; (B) **DNA-Au-2**.

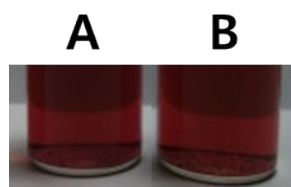


Fig. S4 Photographs of (A) Duplex DNA-Au; (B) **DNA-Au-2**.

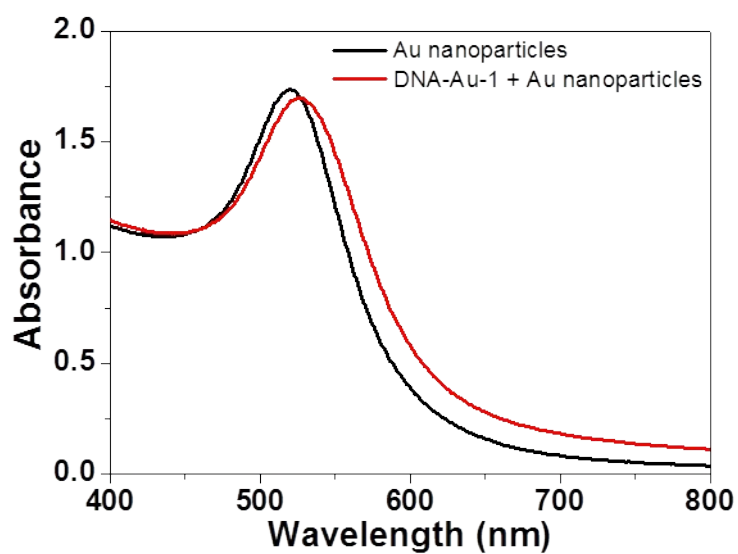


Fig. S5 UV-Vis spectra of Au and mixed **DNA-Au-1** with Au.

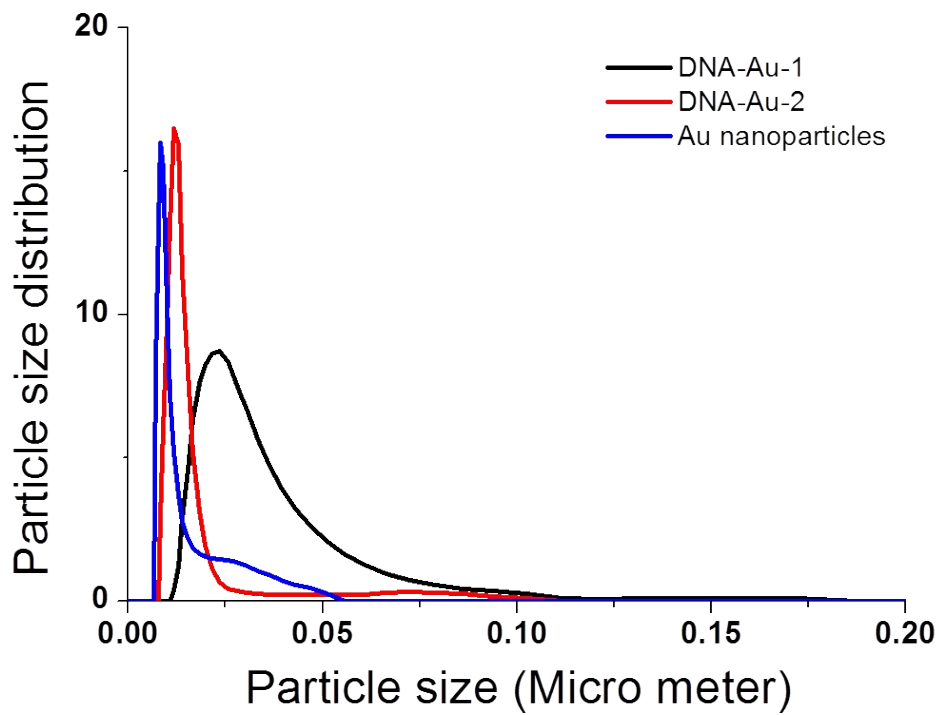


Fig. S6 Dynamic light scattering of Au, DNA-Au-1, and DNA-Au-2.

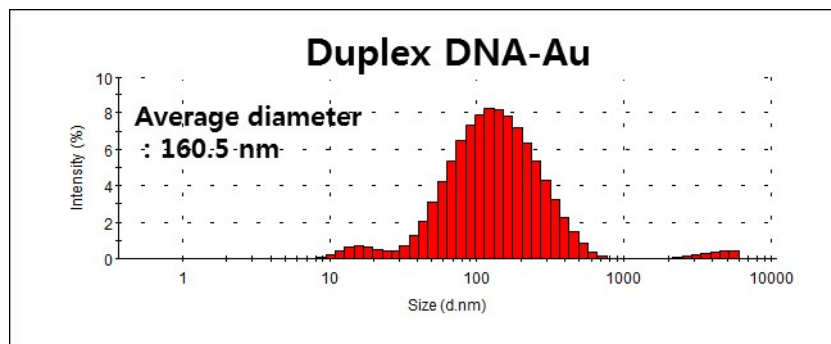


Fig. S7 DLS measurements of duplex DNA-Au

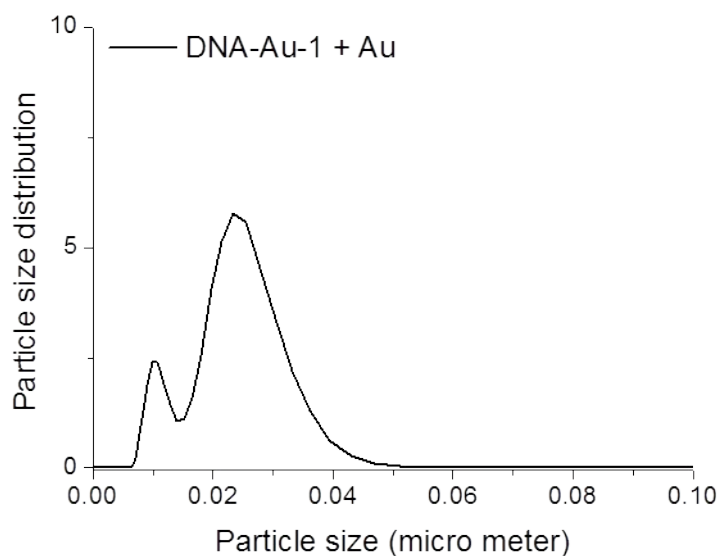


Fig. S8 Dynamic light scattering of mixed **DNA-Au-1** with bare Au nanoparticles.

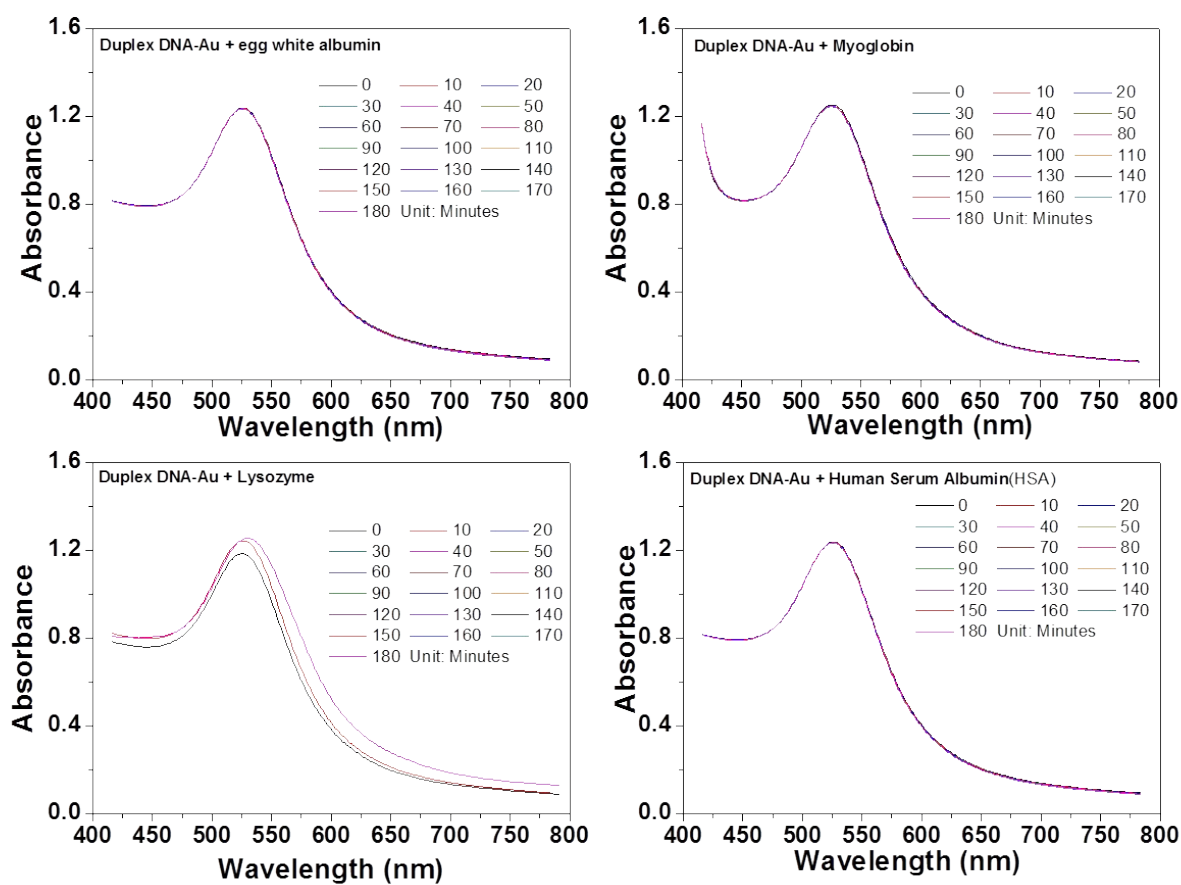


Fig. S9 Time dependent UV-Vis spectra change of duplex DNA-Au (1 nmol) upon adding egg white albumin(10 nmol), myoglobin(10 nmol), lysozyme(10 nmol), HAS(10 nmol), respectively.

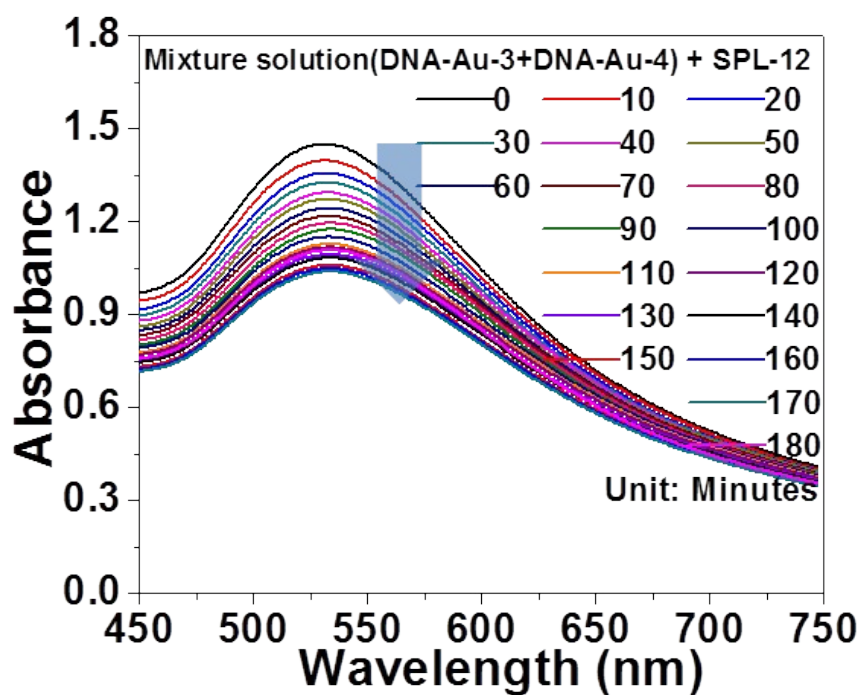


Fig. S10 Time dependent measurements of UV-Vis spectra of 1 nmol duplex DNA-Au solution (mixture of DNA-Au-3 with DNA-Au-4), upon addition of 10 nmol SPL-12. DNA 3: SH-CCC AGG TTC TCTAAAAAAAAA, DNA 4: SH-ACG CAT CTG TGATTTTTTTTT.

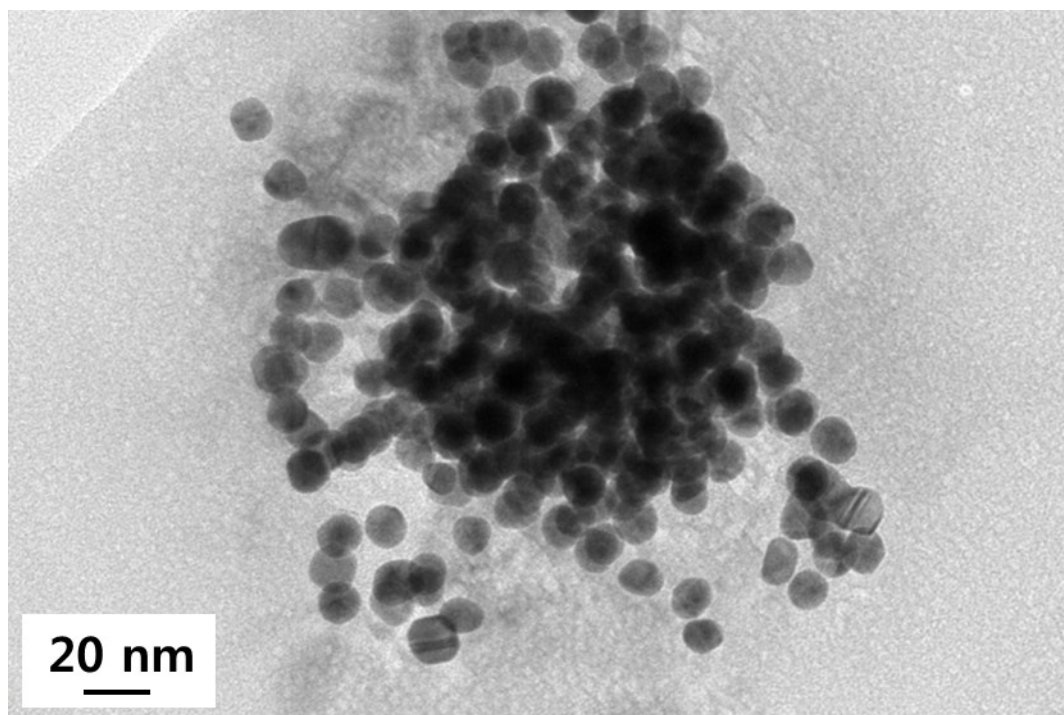


Fig. S11 TEM image of duplex DNA-Au (1 nmol) upon addition of SPL-12 (10 nmol).

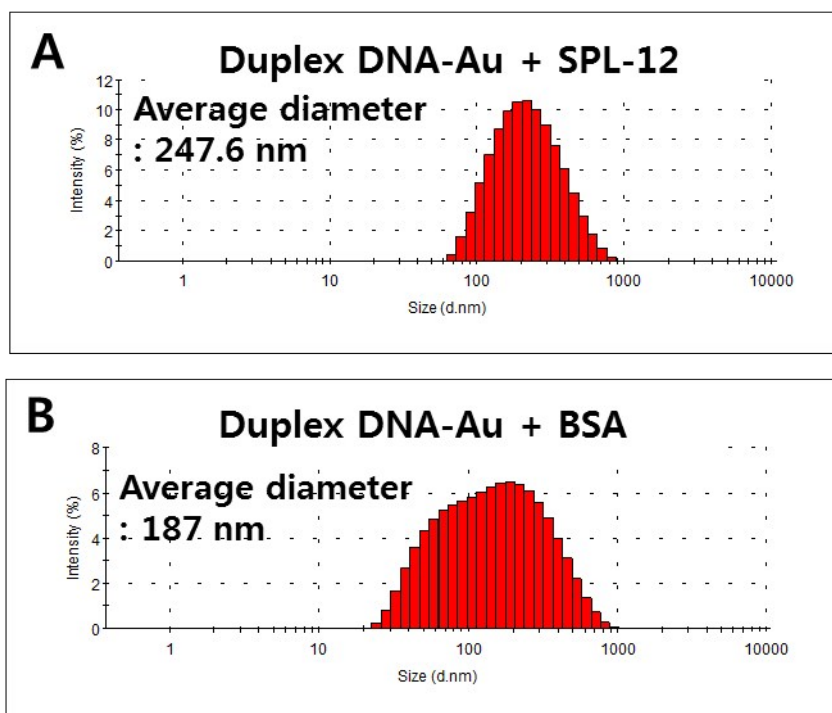


Fig. S12 DLS measurements of duplex DNA-Au upon addition of (A) BSA(10 nmol); or (B) SPL-12(10 nmol).

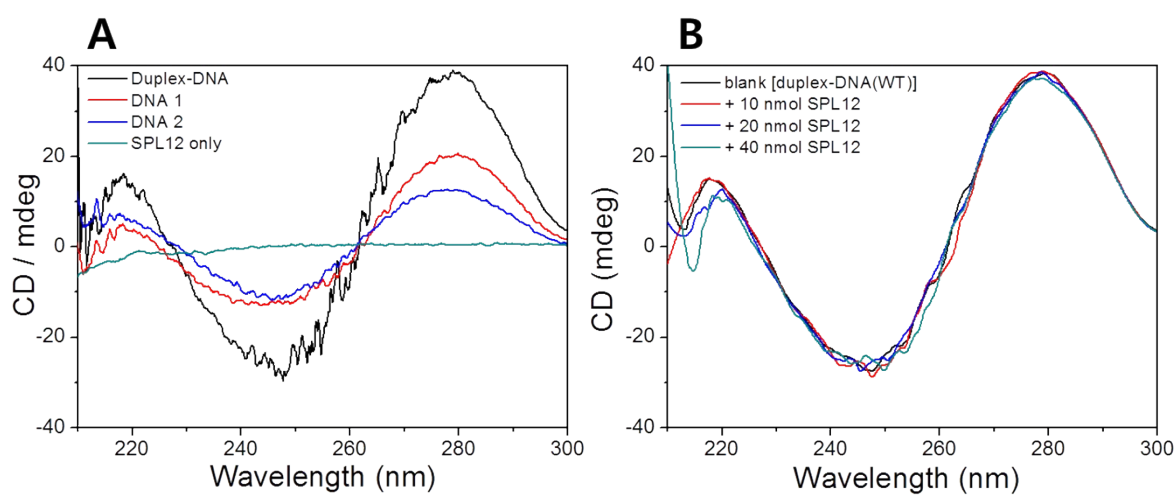


Fig. S13 CD spectra of (A) DNA 1 (20 nmol), DNA 2 (20 nmol), duplex DNA (20 nmol) and SPL-12; (B) CD spectra of duplex DNA upon addition of SPL-12 (0, 10, 20, and 40 nmol).

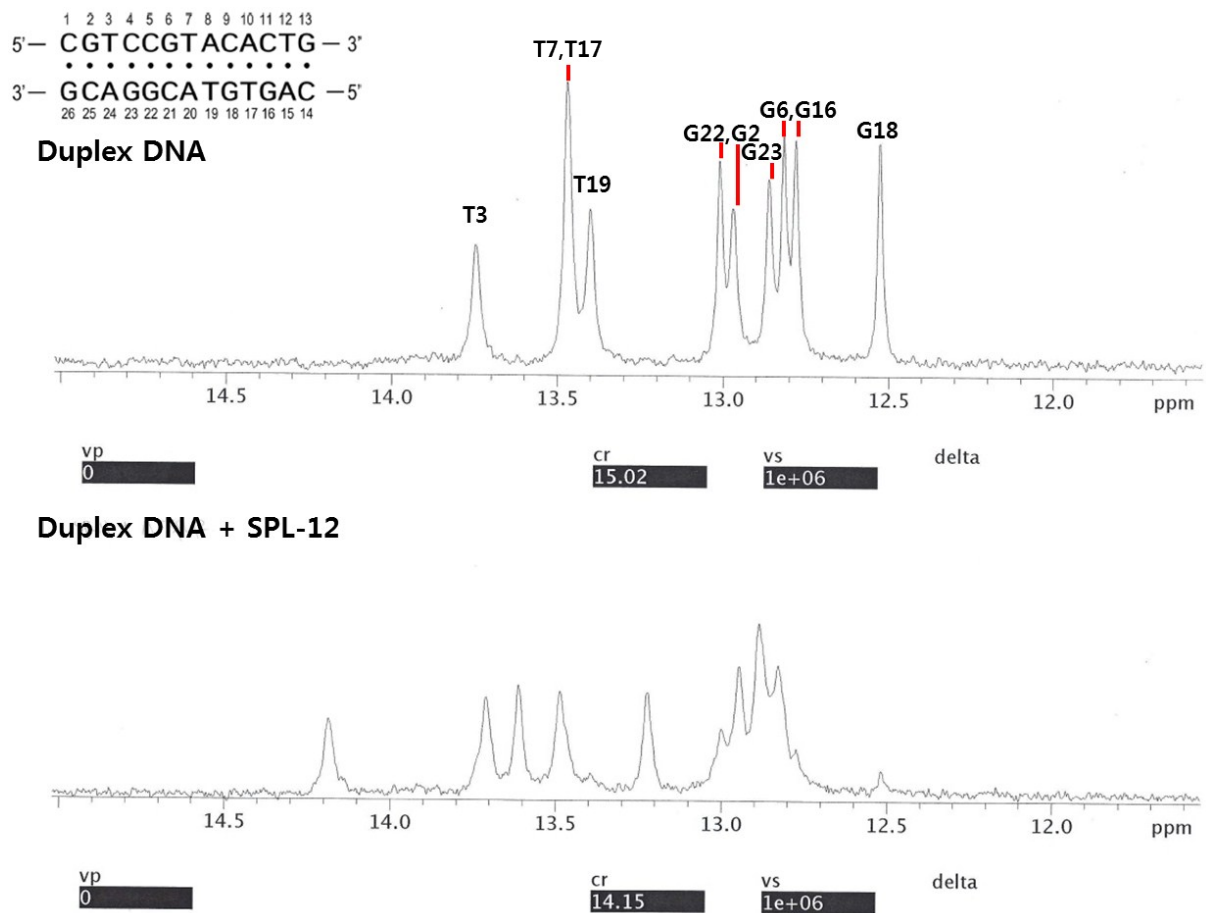


Fig. S14 NMR spectra of duplex DNA without (upper), and with (lower) SPL-12 at 35 °C.