

Supporting Information

Polymerase Chain Reaction-free Variable Number Tandem Repeat Typing using Gold Nanoparticle-DNA Monoconjugates

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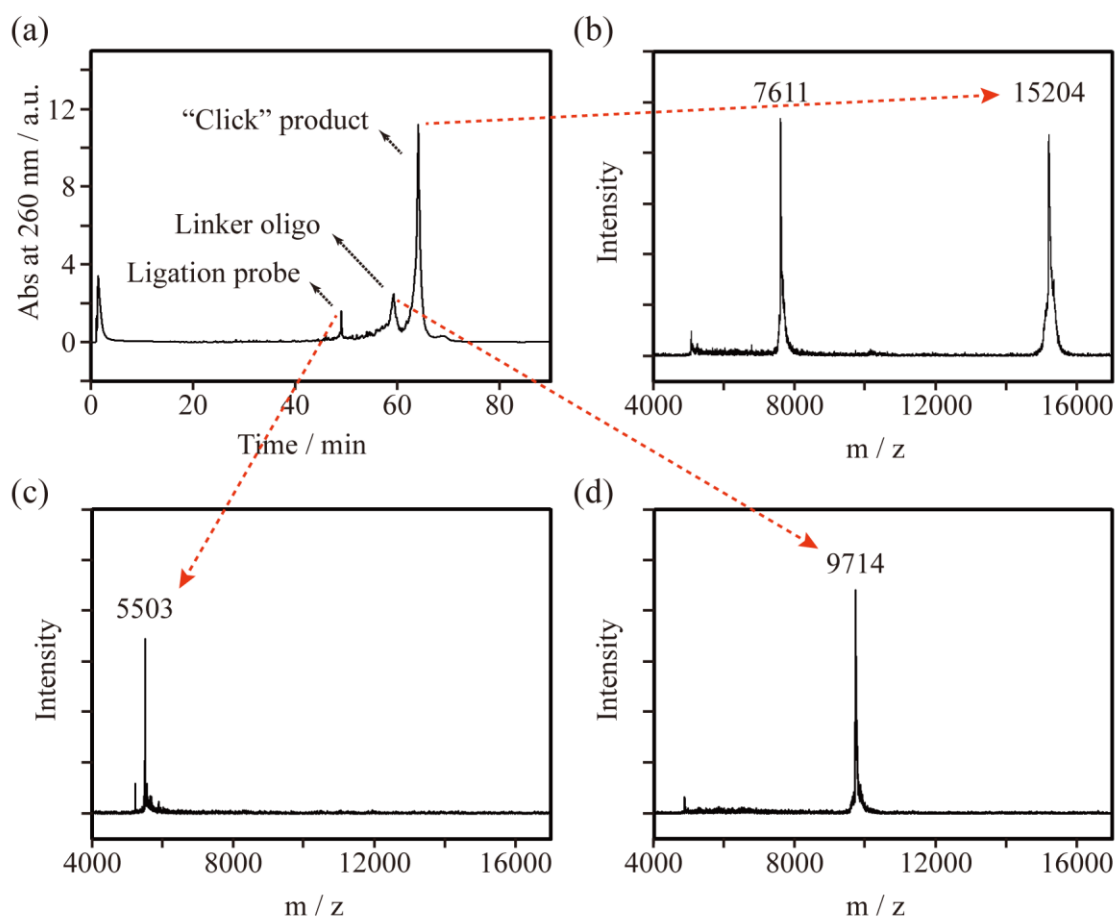


Figure S1. (a) LC chromatogram for separating the “click” reaction mixture and MALDI-TOF MS spectra of each collected fraction from HPLC corresponding to (b) the “click” products (theoretical value of 15198 Da), (c) the ligation probes (theoretical value of 5493 Da), and (d) the linker oligonucleotides (theoretical value of 9705 Da). The peak at 7611 in (b) comes from the double-charged “click” product molecule.

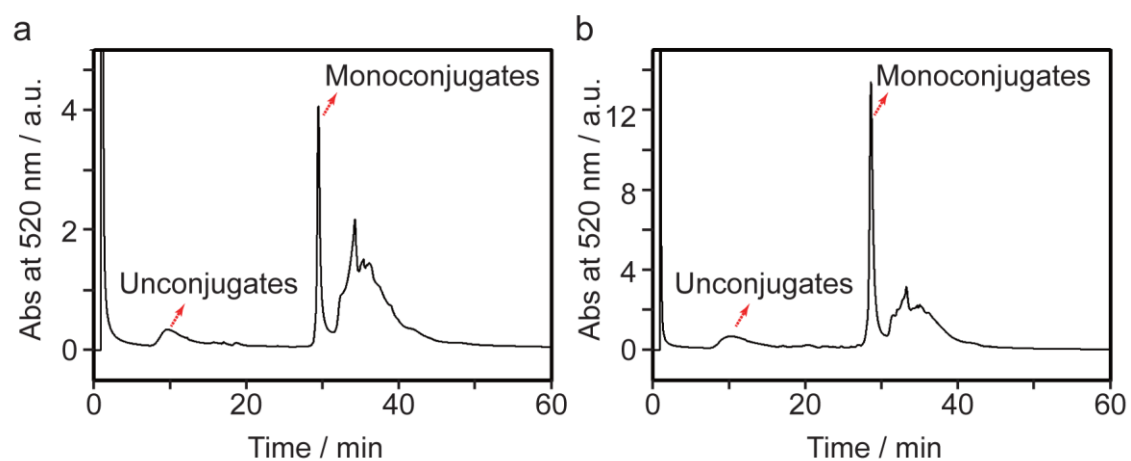


Figure S2. LC chromatograms showing the gold nanoparticle–cDNA conjugate separation; (a) a gold nanoparticle–cDNA1 and (b) a gold nanoparticle–cDNA2.

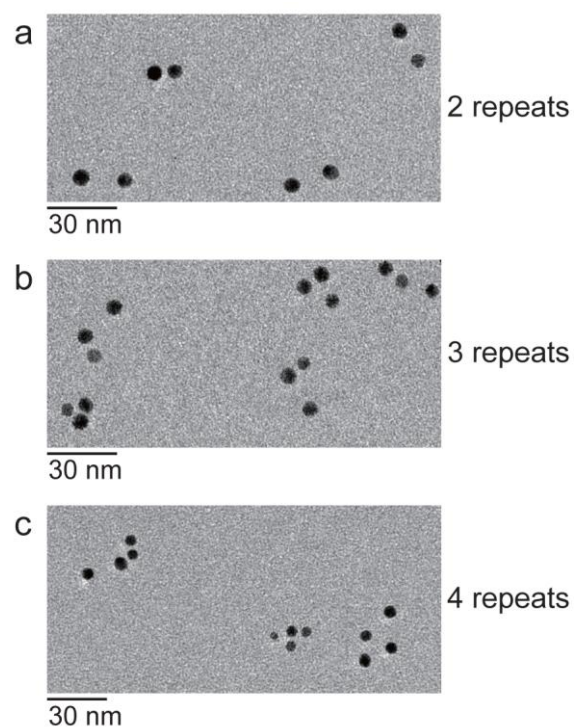


Figure S3. TEM images of the PCR-free VNTR typing assay. A template containing two, three, and four tandem repeats revealed (a) two gold nanoparticle assembly, (b) three gold nanoparticle assembly, and (c) four gold nanoparticle assembly, respectively.

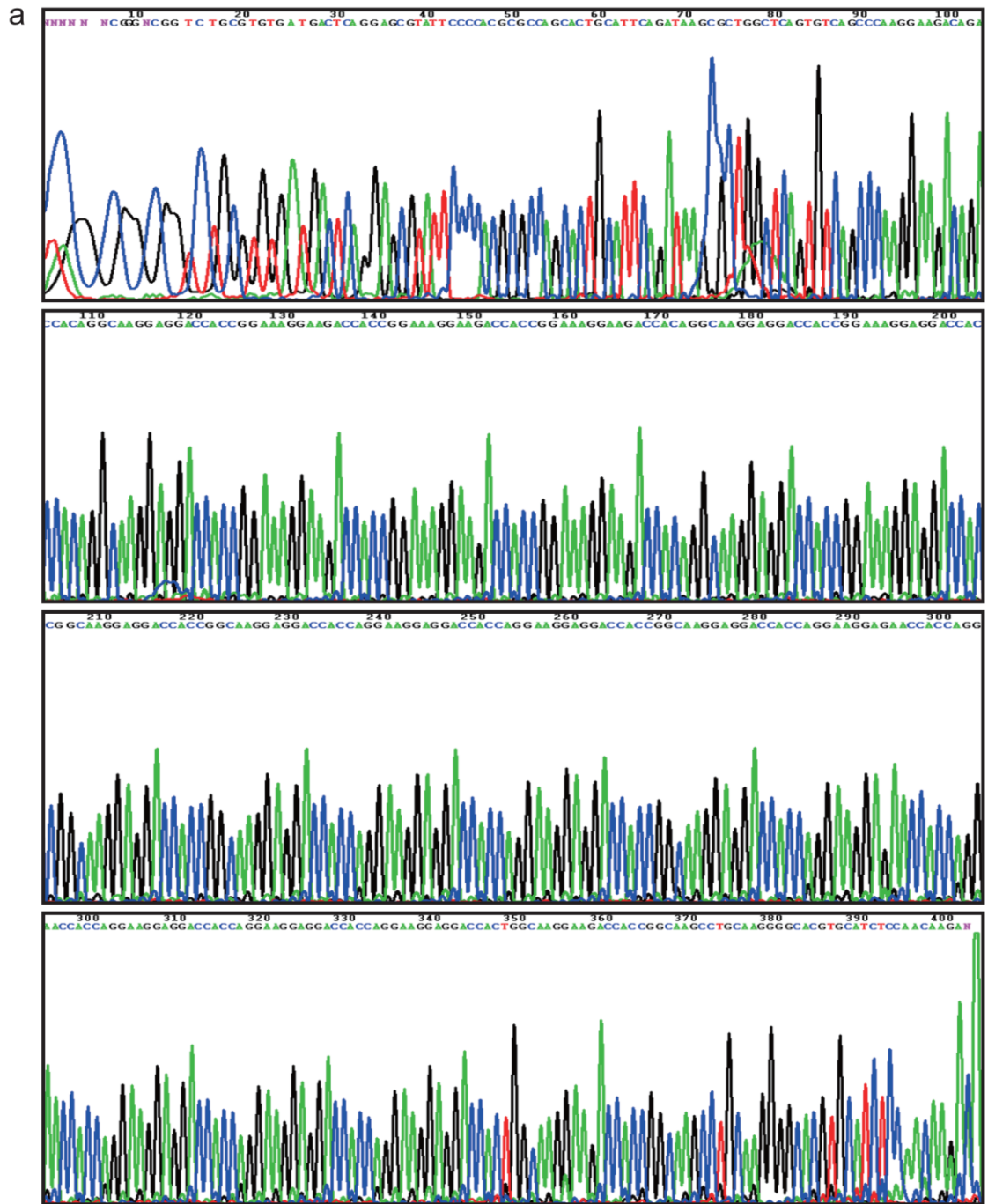


Figure S4. Sequence data of the D1S80 VNTR locus. The D1S80 marker (blue/black/green region) shows that there are 18 repeat units in the human sample with some microvariants.