

SUPPORTING INFORMATION

of

Bioconjugation of a PNA Probe to Zinc Oxide Nanowires for Label-Free Sensing

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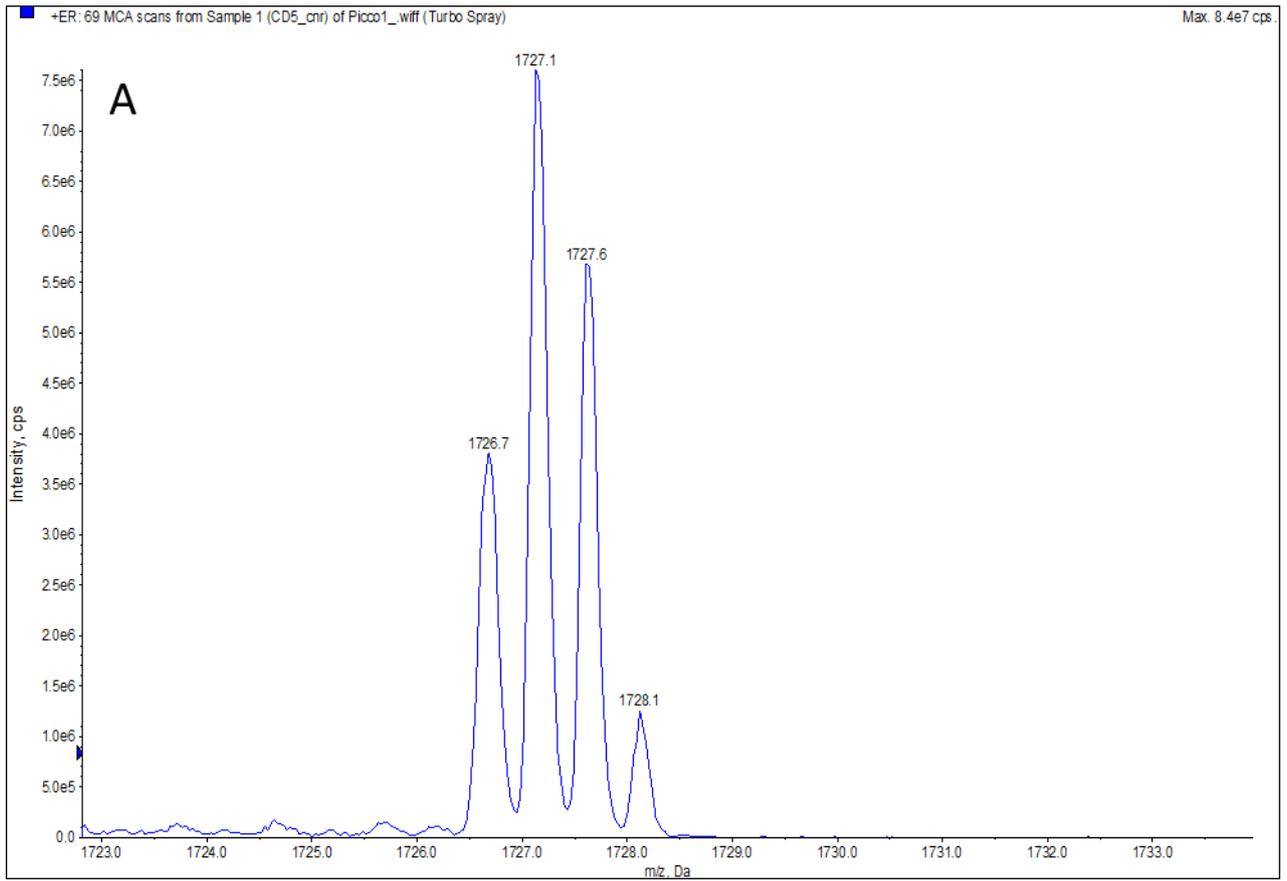
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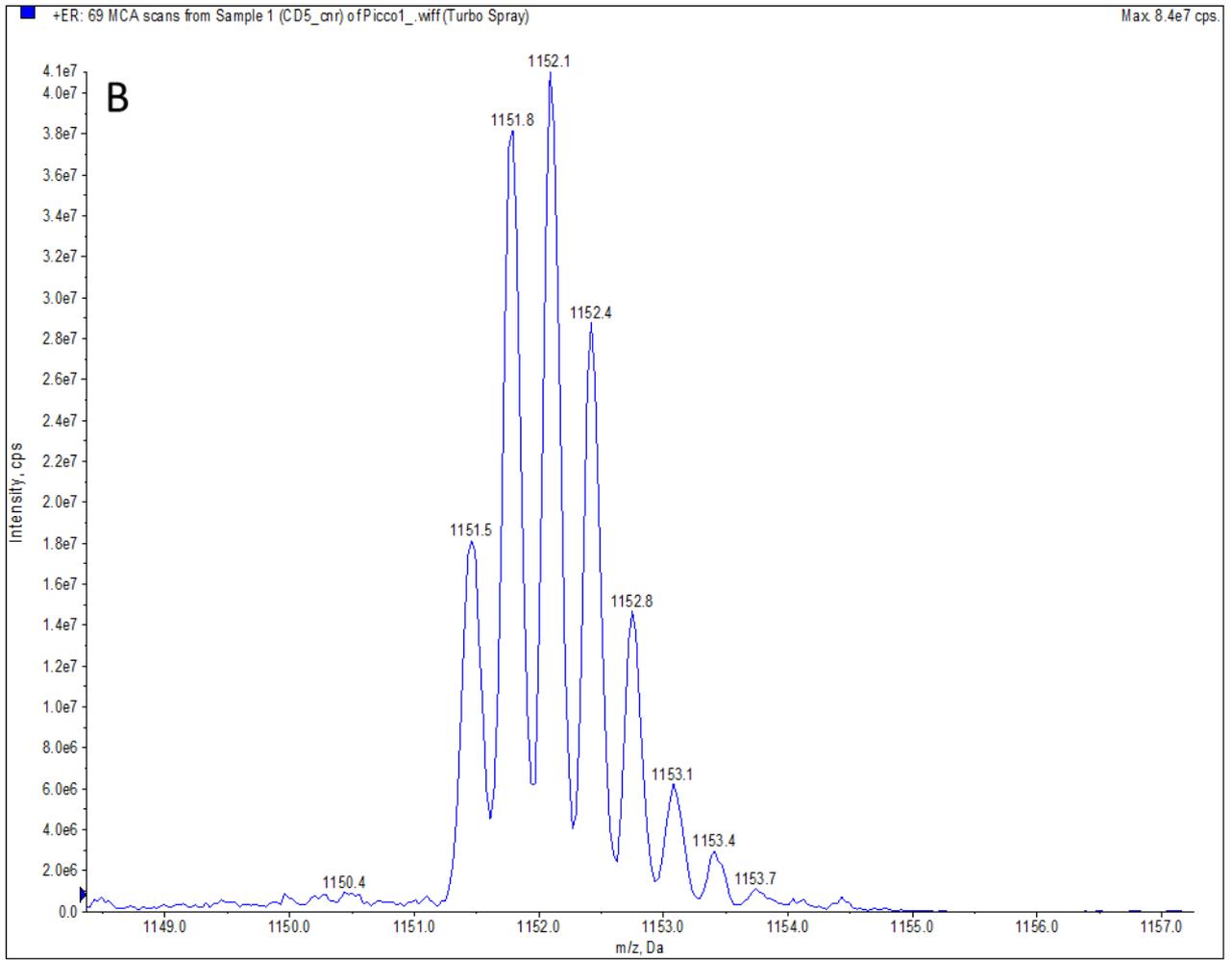
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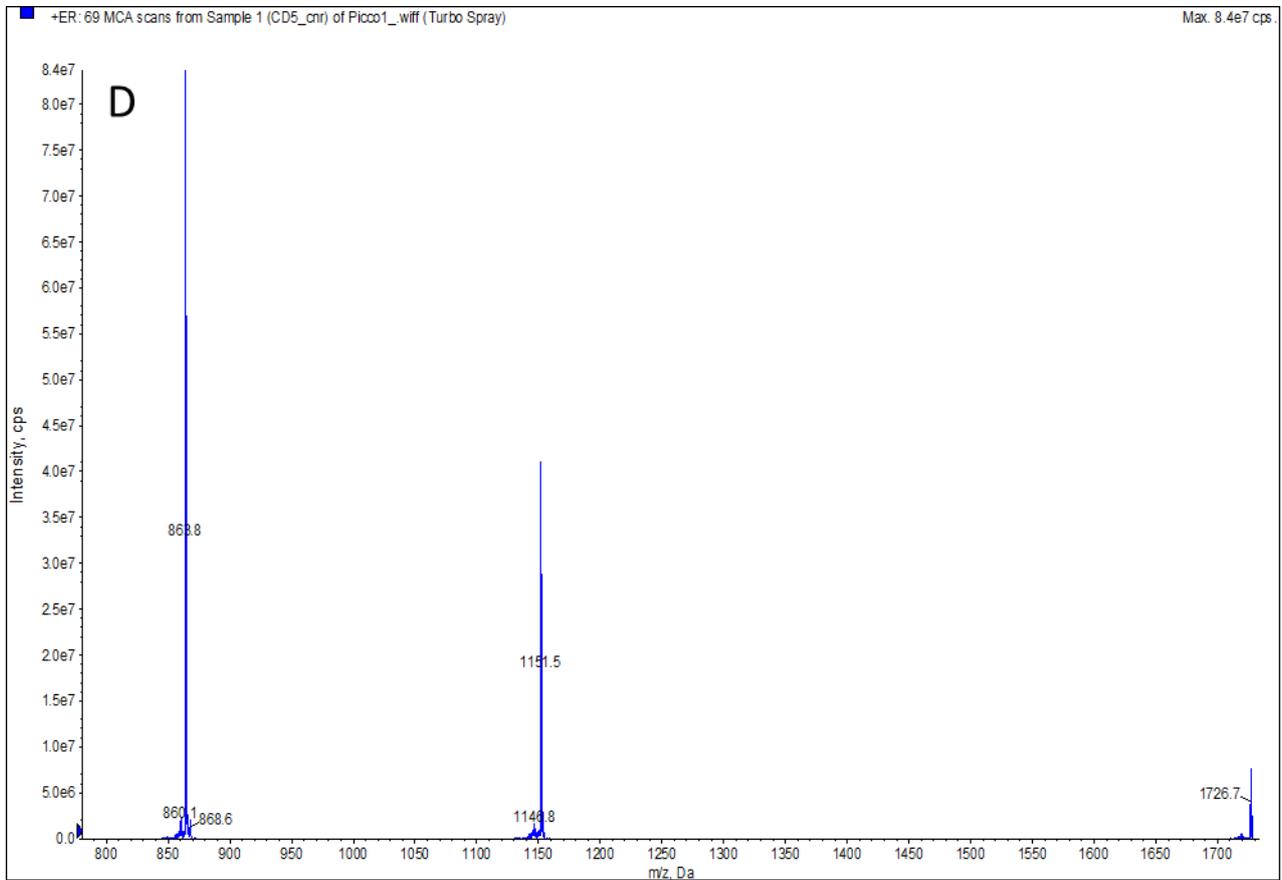
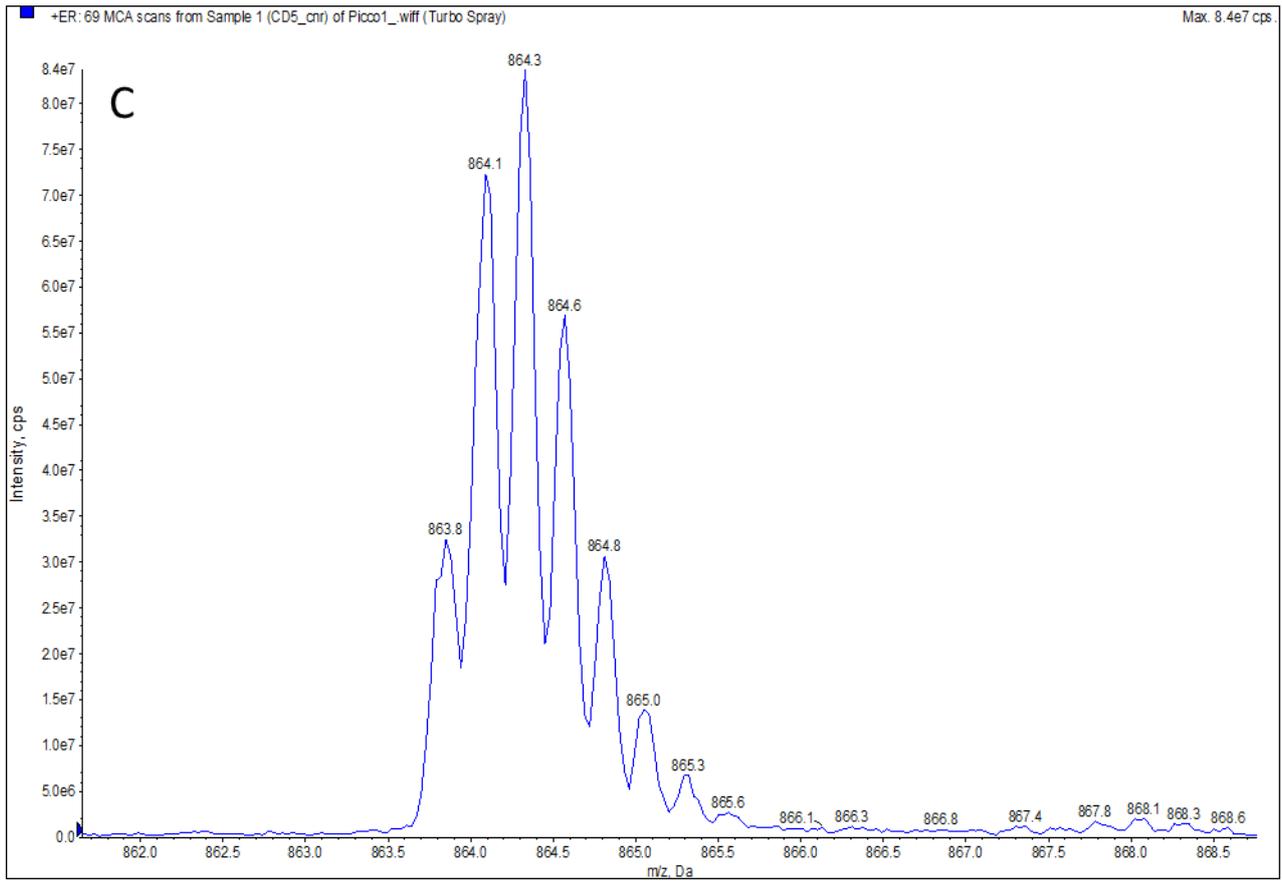
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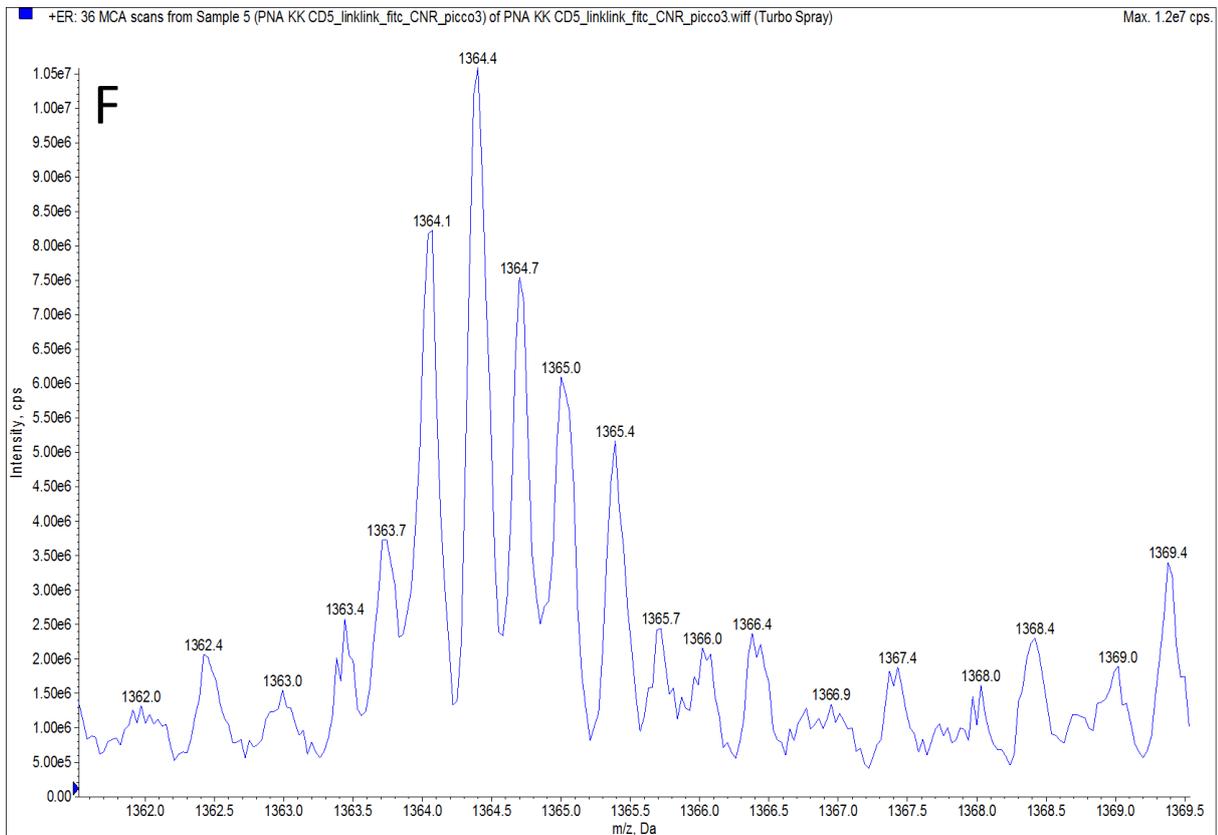
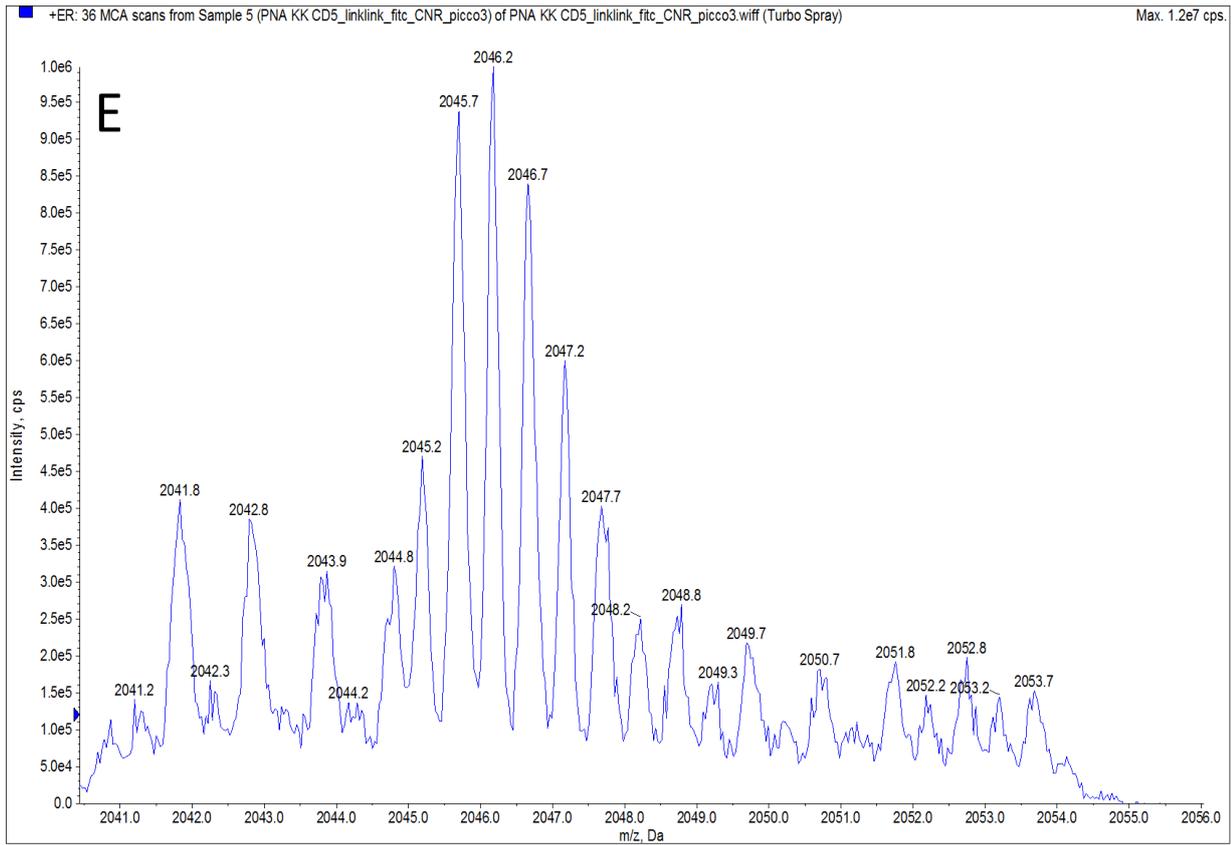
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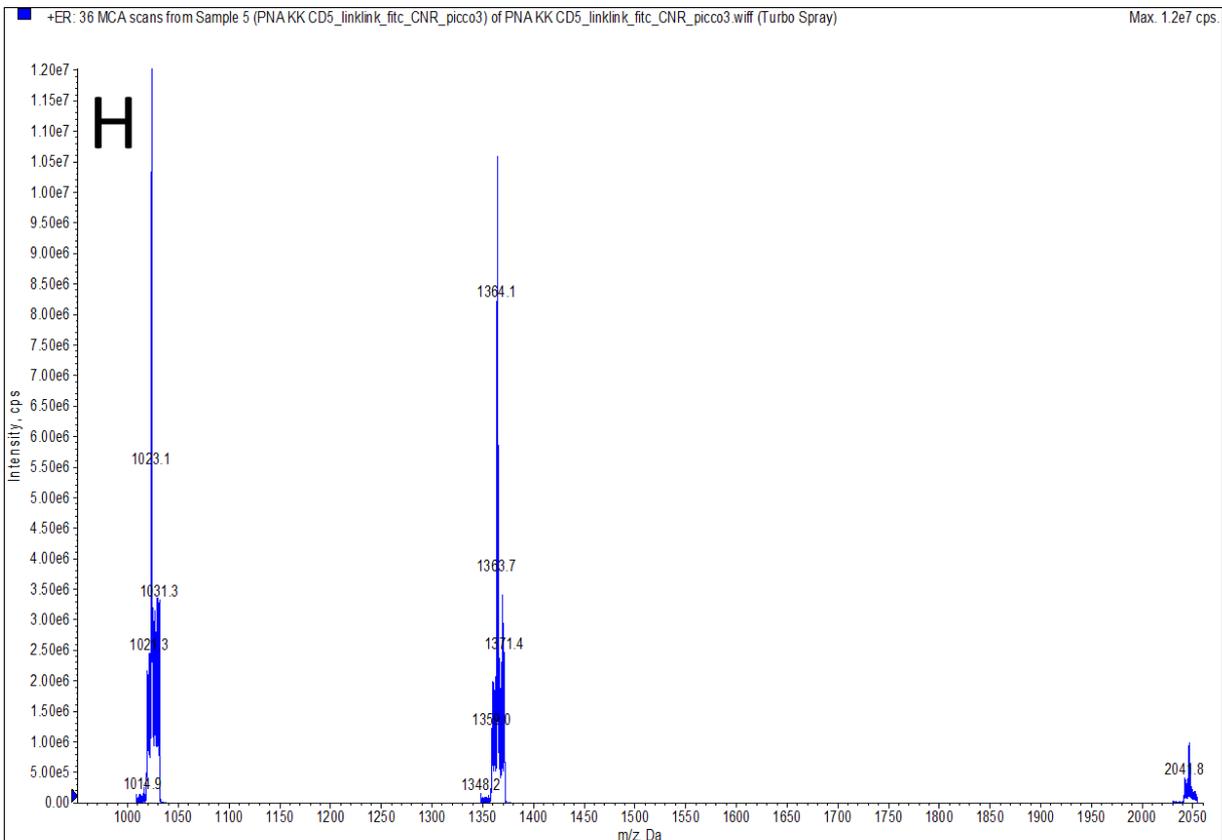
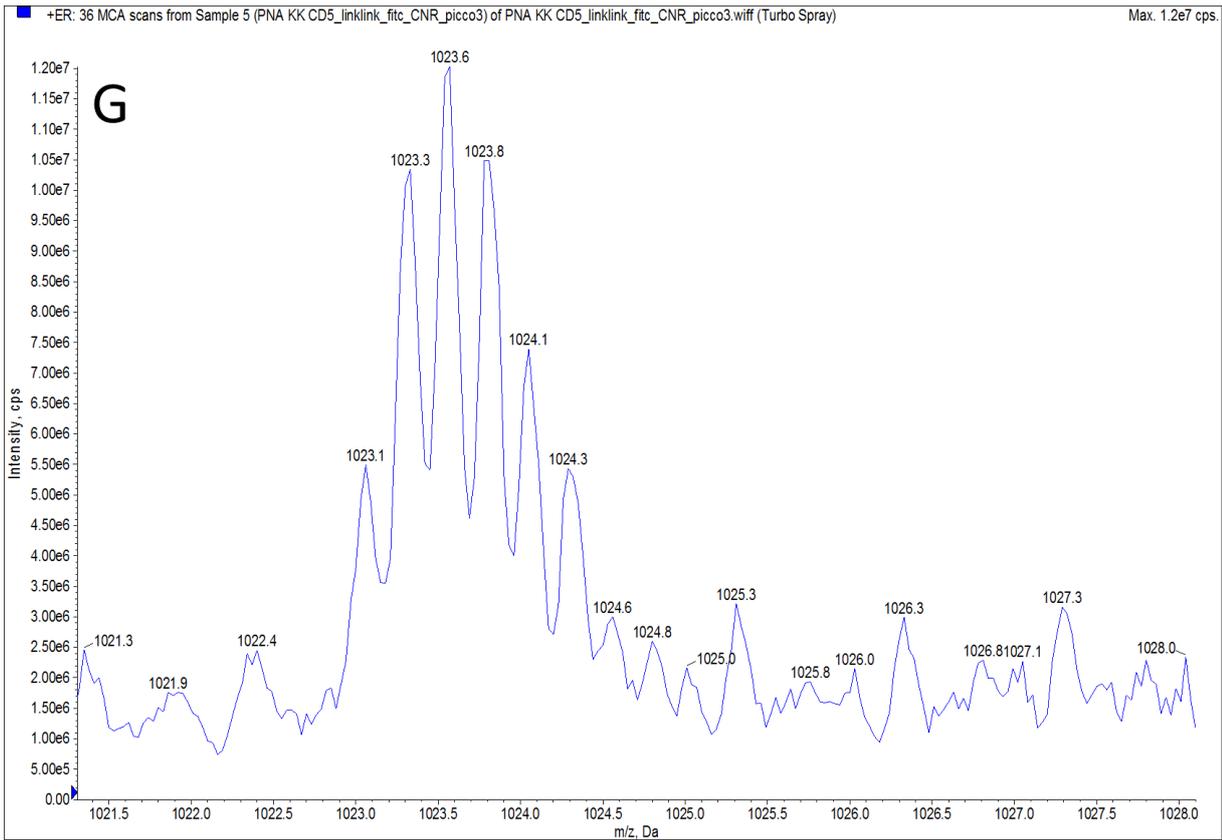


Figure S1: (A-D) **PNA:** Expansions of the MCA ESI-MS spectrum (m/z) calcd. for $[M + H]^+$ 3452.46, calcd. for $[M + 2H]^{2+}$ 1726.73, found 1726.7, calcd. for $[M + 3H]^{3+}$ 1151.49, found 1151.5; calcd. for $[M + 4H]^{4+}$ 863.86, found 863.8. (E-H) **PNA*:** Expansions of the MCA ESI-MS spectrum (m/z) calcd. for $[M + H]^+$ 4089.64; calcd. for $[M + 2H]^{2+}$ 2045.28, found 2045.2; calcd. for $[M + 3H]^{3+}$ 1363.86, found 1363.7; calcd. for $[M + 4H]^{4+}$ 1023.14, found 1023.1.

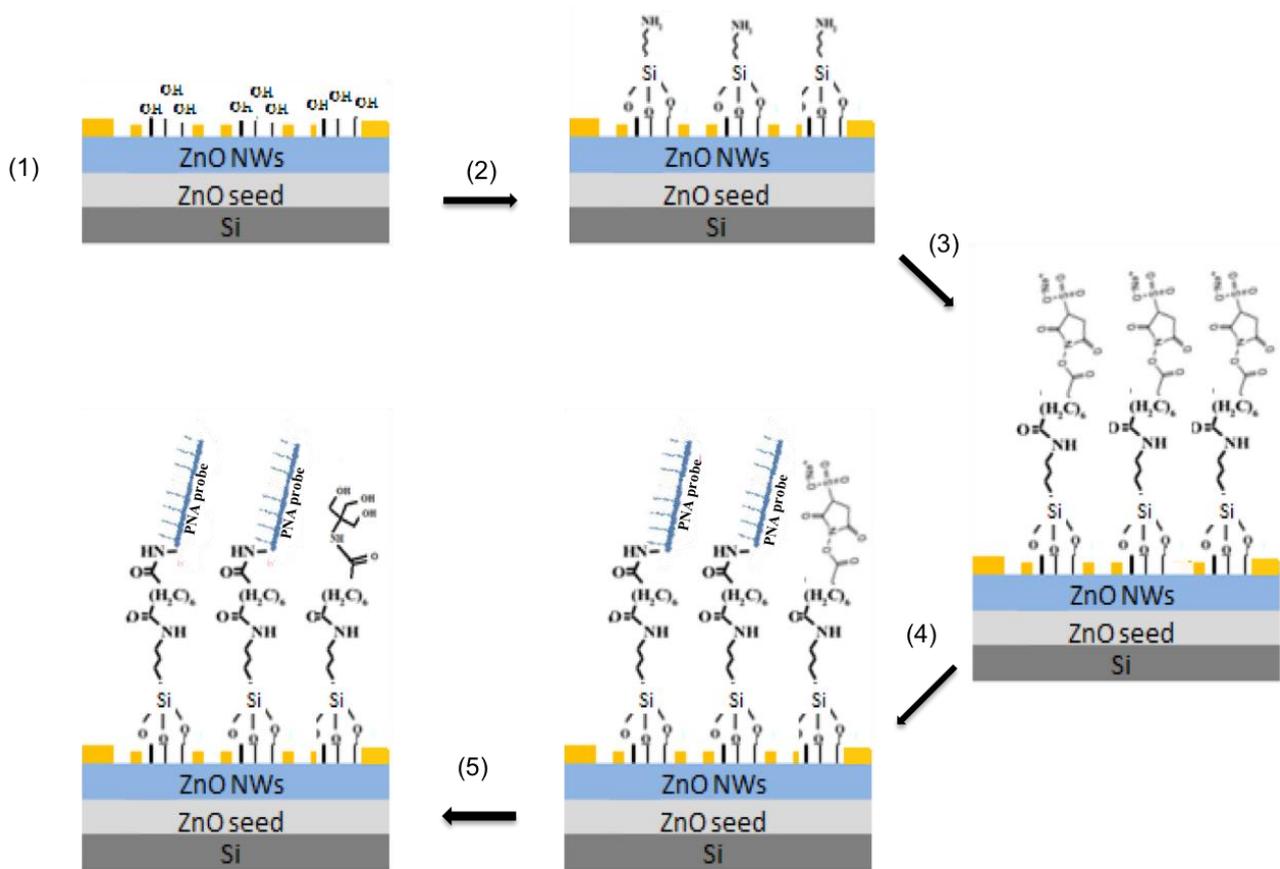


Figure S2. Functionalization scheme of ZnONWs surface. (1) Oxygen plasma. (2) Silanization by APTES. (3) BS³ crosslinker modification. (4) PNA probe immobilization. (5) Surface passivation.

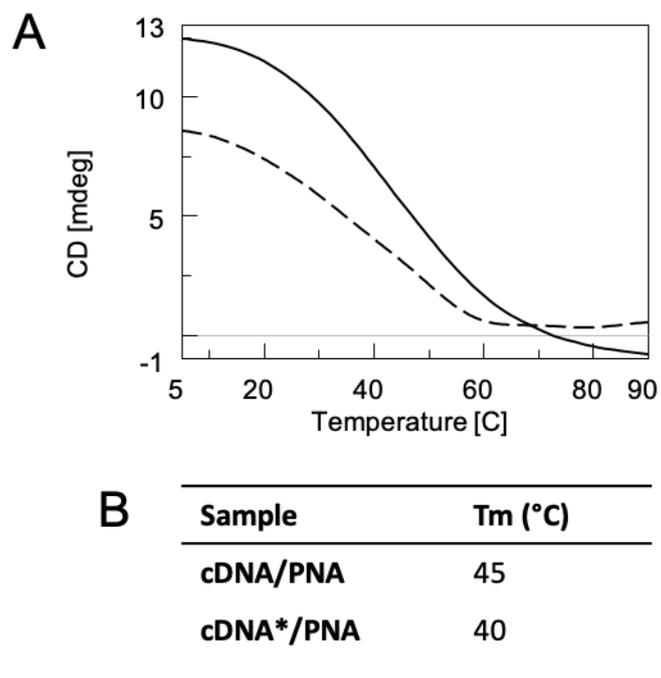


Figure S3. (A) CD melting profiles of **cPNA/DNA** mixture (solid line) and **cDNA*/PNA** (dashed line) at 1:1 ratio. The curves were obtained by monitoring the absorbance at 266 nm, at a heating rate of 0.5 °C/min; (B) Table with T_m values of each sample.

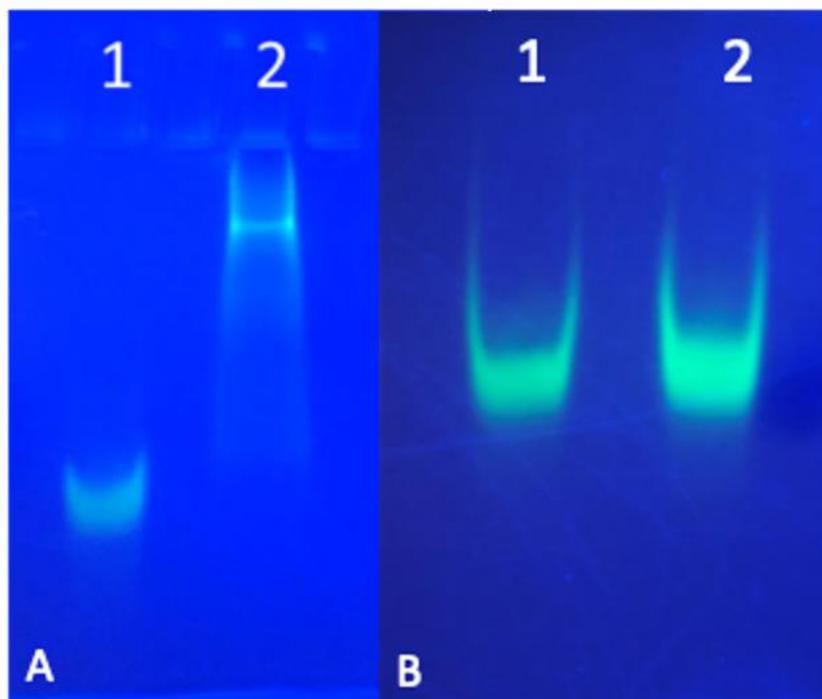


Figure S4. PAGE of cDNA* (panel A) or ctrIDNA* (panel B) annealed alone (lanes 1) or with PNA (1:1) (lanes 2) in 100 mM PBS solution.

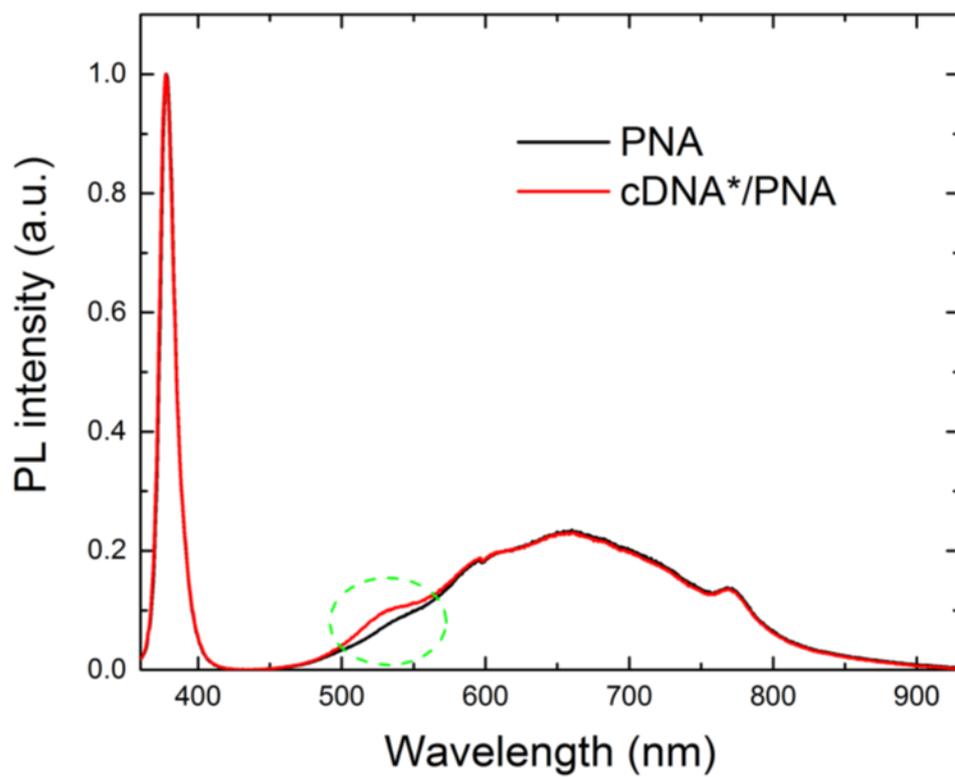


Figure S5. PL spectra of ZnONWs after PNA immobilization (black curve) and after interaction with 100 μ M cDNA* (red line).