

A DNA-based biosensor for monitoring pH *in vitro* and in living cells

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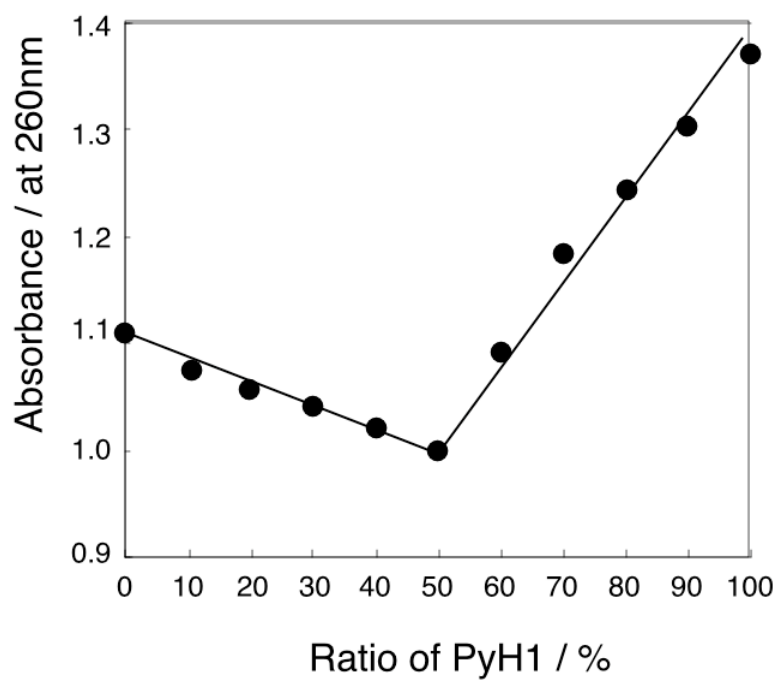


Figure S1. Mixing curve of (5'-TCTTTCTCTTCT-3' (PyH1) / 5'-AGAAAGAGAAGA-3' (PuC1)) in 100 mM Na⁺ and 50 mM Tris-acetate buffer (pH 5.0) at 1 °C.

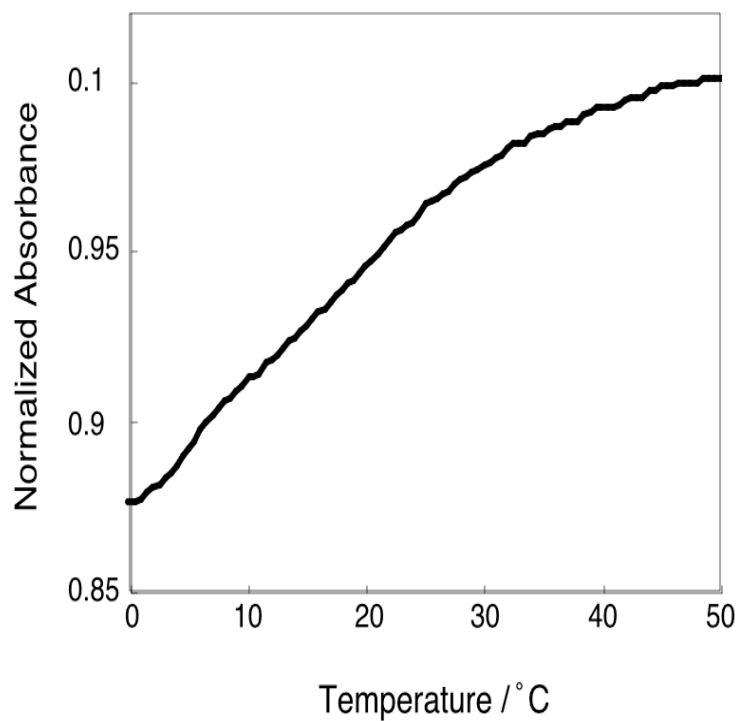


Figure S2. Normalized melting curve of 24 mer 5'-TCTTTCTCTTCT-3'-3'-TTTT-AGAAGAGAAAGA- 5' in 100 mM Na⁺ and 50 mM Tris-HCl (9.0) buffer. The total DNA concentration was 3 μ M.

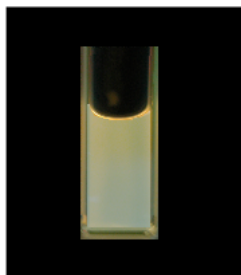


Figure S3. Photograph of the fluorescence of TAMRA-conjugated control DNA in 100 mM Na⁺ and 50 mM Tris-acetate buffer (pH 5.0).

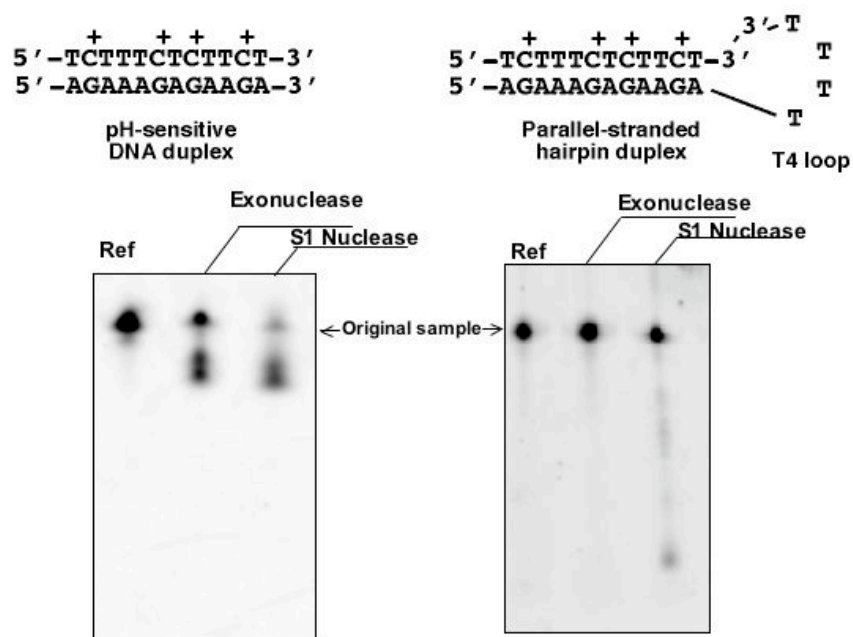


Figure S4. Nuclease resistance of the intermolecular and intramolecular DNA oligonucleotides. DNA oligonucleotides were incubated at 37 °C for 1 h with 1 unit Exonuclease or S1 nuclease. The total DNA concentration was 2 μ M.