

Electronic Supplementary Material

**Isothermal circular strand displacement polymerization of DNA and microRNA
in digital microfluidic devices**

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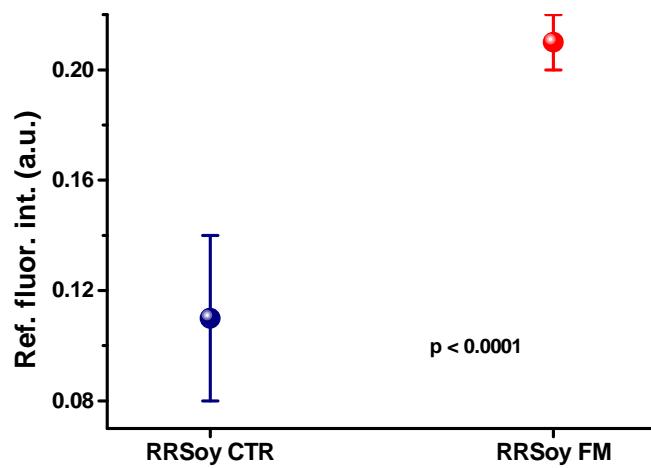


Fig. S1 Average referenced fluorescence intensity produced after the droplet ICSDP detection of a 100 pM **RRSoy FM** solution compared with the average referenced fluorescence intensity produced by the unrelated **RRSoy CTR** sequence at the same concentrations (two-tailed t-test, level 95%, v= 8 p<0.0001). Error bars represent the confidence interval of the mean at the 95% level

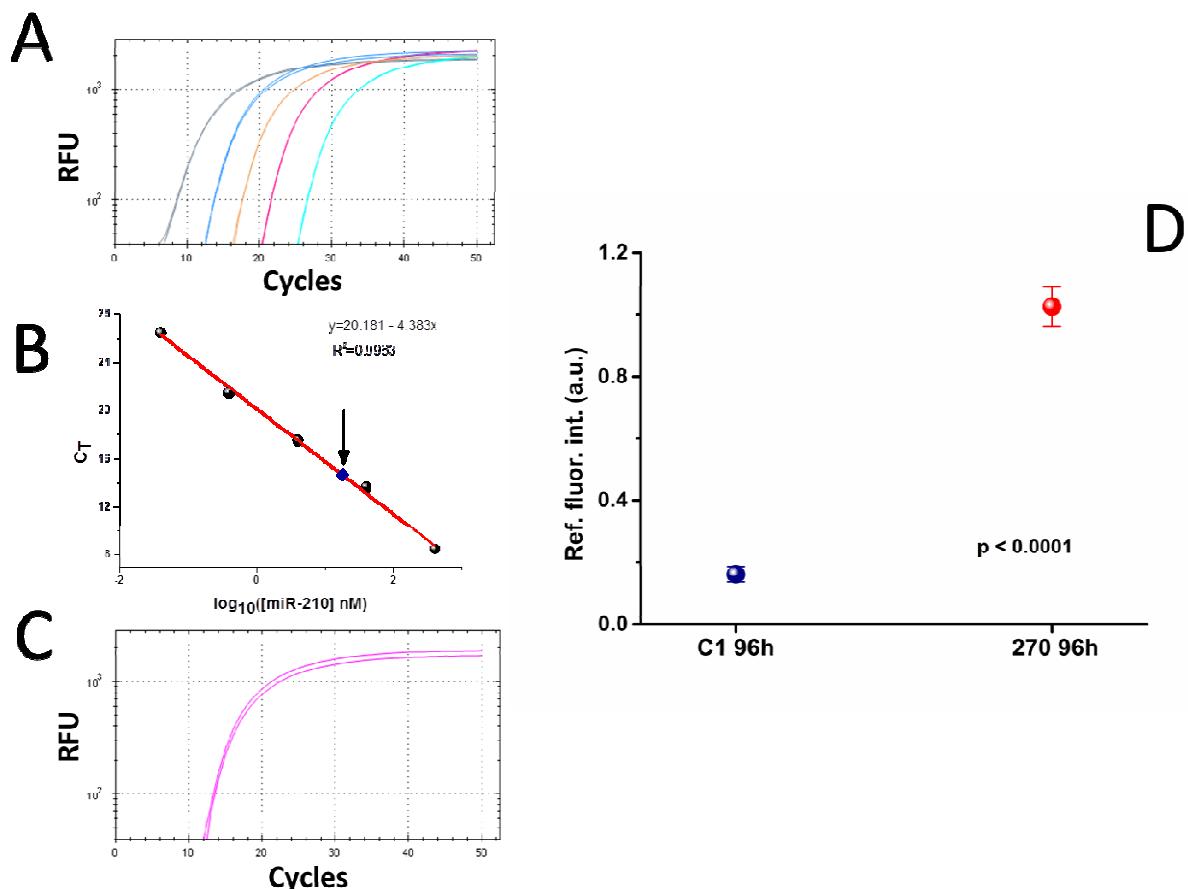


Fig. S2 A,B. RT-qPCR of the external miR-210 control. Decreasing concentration of miR-210 (400 nM, 40 nM, 4 nM, 0.4 nM, 0.04 nM) were cDNA converted and PCR amplified. Panel A shows the reaction curves (the highest concentrations on the left), in panel B the titration curve (the highest concentrations on the right). **C.** RT-qPCR amplification curves of samples obtained from K562 cells after 96 hours after transfection with 270 nM pre-miR-210 (**270 96h**) (duplicated curves of a representative experiment). The amplification product correspond to the arrow indicated in panel B. **D.** Average referenced fluorescence intensity produced after droplet ICSDP detection of miR-210 from samples obtained from K562 cells after 96 hours after transfection with 270 nM pre-miR-210 (**270 96h**), compared with the average referenced fluorescence intensity produced by control samples **C1 96h** (two-tailed t-test, level 95%, v= 8 p<0.0001). Error bars represent the confidence interval of the mean at the 95% level