Supplementary Information

Accurate bulk quantitation of droplet digital PCR

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Methods

Microfluidic ddPCR by commercial droplet generator and droplet reader

QX200 droplet generator (Bio-Rad, #1864002) was used to make emulsions following the manufacture's instruction. Briefly, 20 μL reaction mix was prepared using ddPCR Supermix for Probe (no dUTP) (Bio-Rad, #1863024), 0.5 μM N2 outer primers (F: AAC ACA AGC TTT CGG CAG AC, R:CCC GAA GGT GTG ACT TCC AT) and template (2019-nCoV_N_Positive Control, Integrated DNA Technologies, #10006625). The ddPCR reaction mix was added to the droplet generator and converted to droplets with the use of Droplet Generation Oil for Probes (Bio-Rad, #1863005) and DG8 Cartridges and Gaskets (Bio-Rad, # 1864007). Emulsified samples were transferred to PCR tubes and thermocycled in a Thermal Cycler (Bio-Rad, T100). Thermal cycling was performed at: 10 min at 95 ºC; 45 cycles of 20 s at 95 ºC, 30 s at 55 ºC and 30 s at 72 ºC. The droplets were screened by a QX200 droplet reader (Bio-Rad, #1864003) to quantify PCR positive drops.

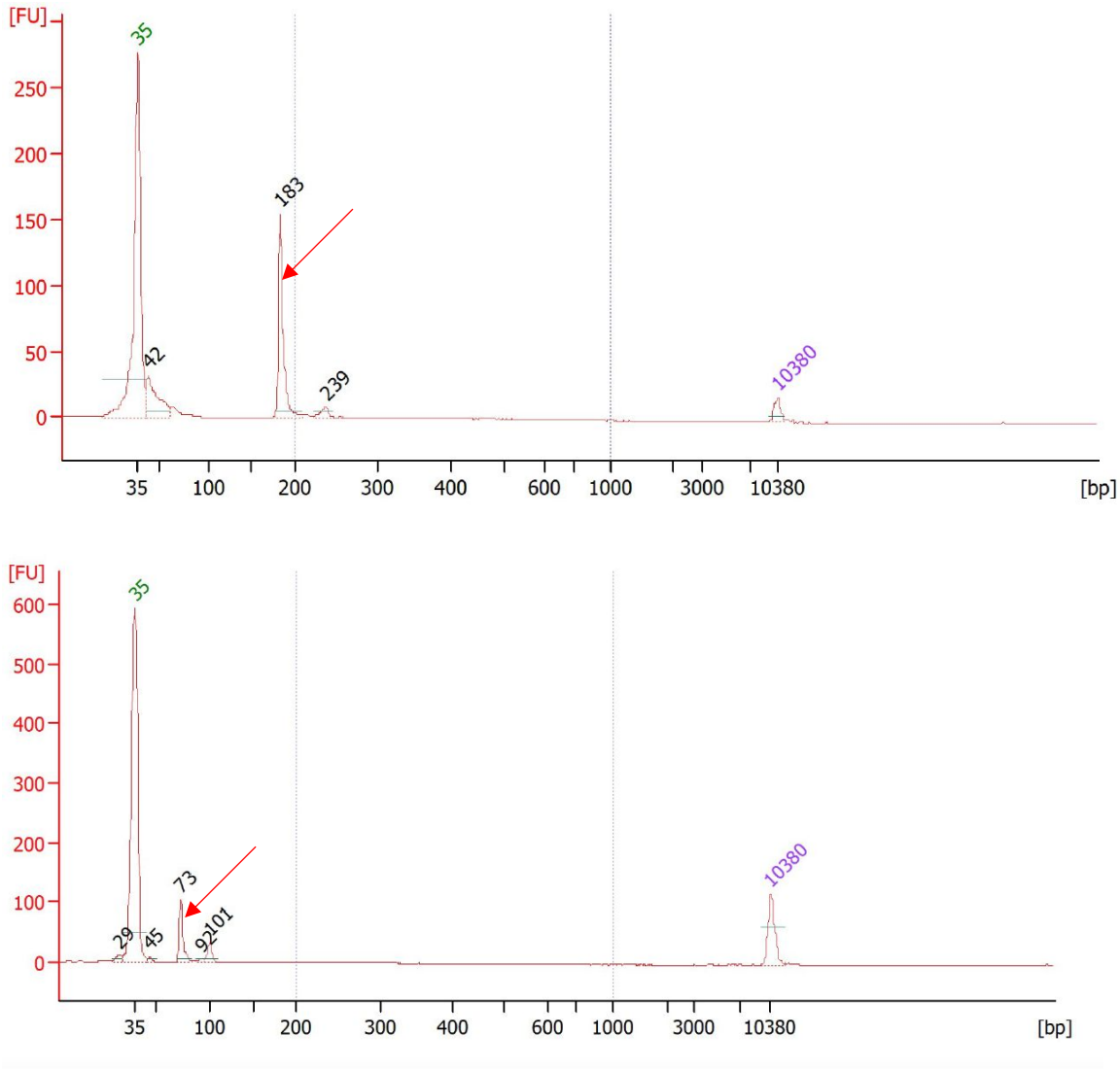

Figure S1 Quantification the ddPCR amplicons using on-chip electrophoresis. Peak representing the correct molecular length using (a) N2 outer primers and (b) N2 primers is detected (indicated by the arrows).