Supplementary Material (ESI) for Lab on a Chip

Microfluidic Device using Chemiluminescence and DNA-arrayed Thin Film Transistor Photosensor for Single Nucleotide Polymorphism Genotyping of PCR Amplicons from Whole Blood

Electronic Supplementary Information

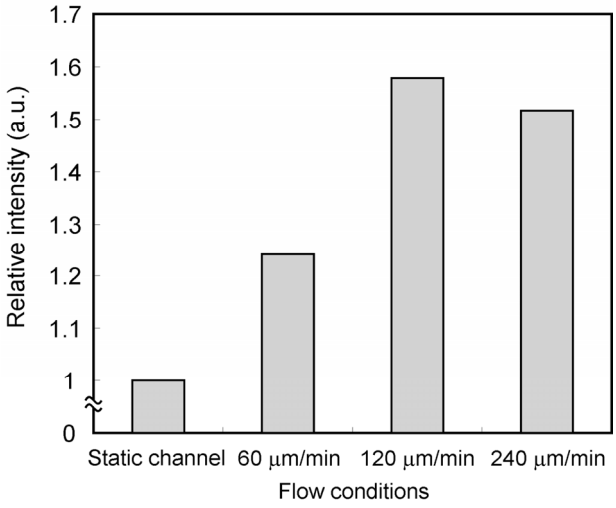

Fig. S1 Relationship between hybridization reaction and flow rate in the microchannel. Relative intensities were derived against the luminescence intensity of the static channel which was set as 1.0.

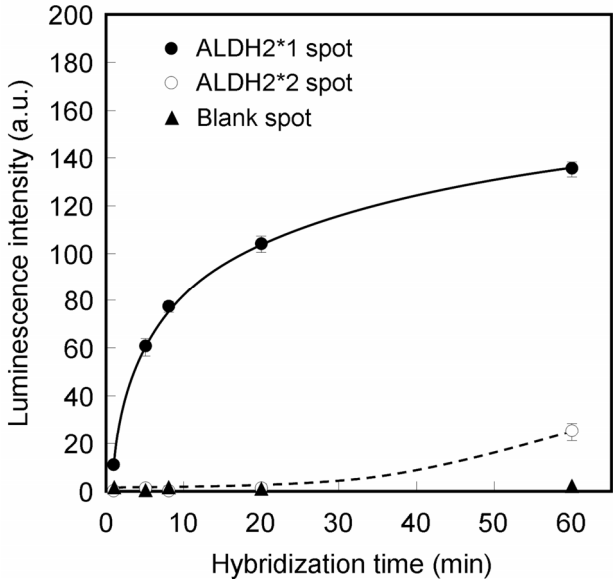

Fig. S2 Signal increment of ALDH2*1/*1 target (63-mer, 100 nM) hybridized to the ALDH2*1 and ALDH2*2 spots on the TFT photosensor. Exposure time was set at 4.8 sec.

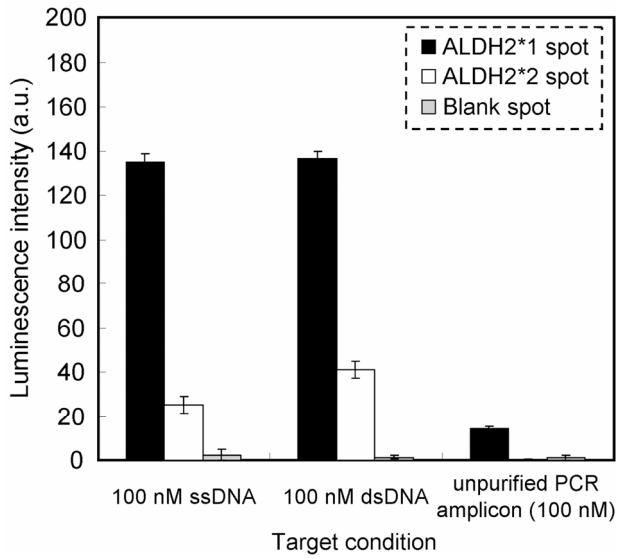

Fig. S3 Comparison of hybridization efficiency based on various target conditions. ALDH2*1*1 was used as a target in all conditions.

Table S1. Total time required for SNP detection

Operation steps	Operating time (min)
Direct PCR	25.0
Denaturing of dsDNA	10.0
Shuttle hybridization	5.0
Washing	1.3
HRP labeling	10.0
Washing	0.8
Addition of substrate	0.5
Observation	0.1
Total	52.7