Supplementary Information

Fluorescence detection of single-nucleotide differences using aptamer-forming binary DNA probes.

Saori Kamoto, Masumi Hyuga and Teru Kato

Graduate School of Bionics, Computer and Media Sciences, Tokyo University of Technology,

1404-1 Katakura, Hachioji, Tokyo 192-0982, Japan

Table of Contents

Fig. S1 Structure of deoxythymidine labeled with fluorescein

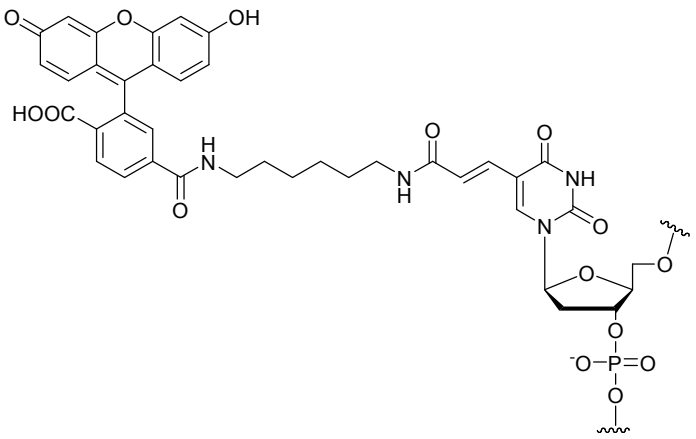
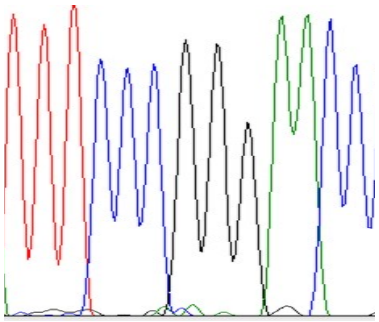


Fig. S2 Sequencing data for the PCR products amplified from human genomic DNA, which include CYP-681 (a) or CYP-636 (b). Data around the SNP sites are shown. Nucleotides with SNP are shown in capital letters.

(a)CYP-681: t t a t t t c c c G g g a a c c c a t a



(b)CYP-636: g c a c c c c c t g G a t c c a g a t a

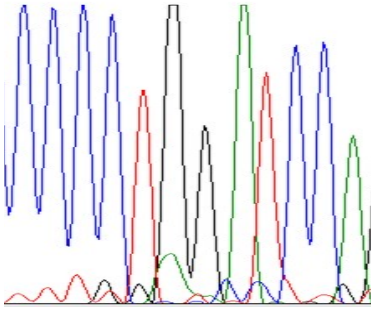


Table S1 DNA sequences used in this study. “T” in bold indicates deoxythymidines labeled with fluorescein.

DNAs	Sequence
CYP-681 (X = G, A, T, or C)	5'-TTATTTCCCXGGAACCCATA-3'
BP 1 (Y = T or C)	5'-CCAGTTGG**T**GYGGGAAATAA-3'
BP 2	5'-TATGGGTTCCCACCAACTGG-3'
CYP-636 (X = G, A, T, or C)	5'-GCACCCCCTGXATCCAGATA-3'
BP 3	5'-CCAGTTGG**T**GCAGGGGGTGC-3'
BP 4 (Y = T or C)	5'-TATCTGGATYCACCAACTGG-3'
PCR primer for 96mer target containing CYP-681 (forward)	5'-TATGCAATAATTTTCCCACTATC-3'
PCR primer for 96mer target containing CYP-681 (reverse)	5'-TCTCCAAAATATCACTTTCCATAA-3'
PCR primer for 81mer target containing CYP-636 (forward)	5'-GAATGAAAACATCAGGATTGTAA-3'
PCR primer for 81mer target containing CYP-636 (reverse)	5'-ACTGTAAGTGGTTTCTCAGGAAG-3'

Table S2 Sequences of ssDNAs amplified from *CYP2C19* gene by an asymmetric PCR method. These sequences were determined by a standard dideoxy method. The sequences of CYP-681 and CYP-636 are shown in bold letters. Nucleotides with SNP are shown in red letters. The PCR primer regions are underlined.

ssDNA target	Sequence
96mer target containing CYP-681	5'- TATGCAATAATTTTCCCACTATCATTGA**TTATTTCCCGGGAACCCATAA**CAAATTACTTAAAAACCTTGCTTT TATGGAAAGTGATATTTTGGAGA-3'
81mer target containing CYP-636	5'- GAATGAAAACATCAGGATTGTAA**GCACCCCCTGGATCCAGGTA**AGGCCAAGTTTTTTGCTTCCTGAGAAACCA CTTACAGT-3'