Electronic Supplementary Material (ESI) for RSC Advances.

Table S1. Thermocycling cocktail of Sanger Sequencing PCR

Reagents	Volume (μL)
PCR buffer	5
Tag enzyme	0.25
dNTP	4
amplification primer mix	2
H_2O	37.75
cDNA	1(10ng/μL)

Table S2. Thermocycling cocktail of array-based MALDI-TOF PCR

Reagents	Volume(μL)
H_2O	0.44
PCR buffer	0.5
$MgCl_2$	0.4
dNTP	0.1
PCR primer mix	1.0
Quality control	0.36

PCR enzyme	0.2
cDNA	2（10 ng/μL）

Table S3. Thermocycling cocktail of array-based MALDI-TOF SAP

Reagents	Volume(μL)
H_2O	1.53
SAP buffer	0.17
Shrimp alkaline phosphatase	0.30

Table S4. Thermocycling cocktail of array-based MALDI-TOF extension reaction

Reagents	Volume(μL)
H_2O	0.62
Buffer plus	0.20
Termination mix	0.20
Extension primer mix	0.94
Extension enzyme	0.04

Table S5. Thermocycling conditions of Sanger sequencing and array-based MALDI-TOF

Item	Cycles		Temperature	Time
Thermocycling conditions of Sanger Sequencing PCR			95℃	10min
	40cycles		95℃	30s
			58℃	30s
			72℃	60s
			72℃	7min
Thermocycling conditions of PCR			95℃	2min
	45cycles		95℃	30s
			56℃	30s
			72℃	1min
			72℃	5min
			4℃	4min
Thermocycling conditions of SAP	No cycle		37℃	40min
			85℃	5min
			4℃	5min
Thermocycling conditions of extension reaction			95℃	30s
	40cycles		95℃	5s
		5cycles	52℃	5s
			80℃	5s
			72℃	3min
			4℃	5min