

FOR THE RECORD

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Allele Frequency Distribution of STR Loci D13S1807 and D22S693 in Two Populations

POPULATIONS: 100 unrelated Chinese volunteer donors, 100 unrelated Thai volunteer donors.

KEYWORDS: forensic science, short tandem repeat, D13S1807, D22S693, Chinese, Thai

Blood Specimens were obtained from 100 unrelated Chinese volunteer donors, 100 unrelated Thai volunteer donors. DNA samples were extracted from blood specimens using Chelex-100 (1). Genotyping were carried out by PCR in a PE9600 cycler. The components of a 20 μ L reaction mixture were as follows: template DNA 20 ng, primer 0.2 μ mol/L each, dNTPs 200 μ mol/L each, KCl 50 μ mol/L, Tris-HCl (pH 8.3) 10 mmol/L, MgCl₂ 1.5 mmol/L, Taq polymerase 1U. Primer sequences:

D13S1807 5'-TTTGGTAAGAAAAACATCTCCC-3';

5'-GGCTGCAGTTAGCTGTCATT-3'.

D22S693 5'-CAAAGTGAGACCCCATCTCA-3';

5'-TATGTACAGACCTGCAACTTGC-3'.

PCR conditions: start at 94°C for 5 min, followed by 30 cycles consist of 40 s at 94°C, 40 s at 64°C for D13S1807 or 40 s at 60°C for D22S693, 45 s at 72°C followed by a 7 min extension at 72°C. The amplified products were electrophoresed in 6% polyacrylamide gel by using 100 bp ladder and allelic markers as size markers, followed by silver staining. The amplified products were examined by an ABI PRISM™ 377 Genetic Analyzer. Data were analyzed by The Promega Software, POWERSTATS. The complete dataset is available to any interested researcher upon request.

Reference

1. Walsh PS, Metzger DA, Higuchi R. Chelex 100 as a medium for simple extraction of DNA for PCR-based from forensic material. *Biotechniques* 1991;10:506-13.

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TABLE 1—Genotype distributions of *D13S1807* and *D22S693* in two populations.

Genotypes	D13S1807		Genotypes	D22S693	
	Chinese (<i>n</i> = 100)	Thai (<i>n</i> = 100)		Chinese (<i>n</i> = 100)	Thai (<i>n</i> = 100)
12-12	...	...	16-16	...	...
13-12	1	...	17-16	—	...
13-13	...	1	17-17	1	2
14-12	...	...	18-16	...	...
14-13	2	1	18-17	...	...
14-14	...	5	18-18	...	...
15-12	...	...	19-16	...	...
15-13	...	2	19-17	...	1
15-14	...	1	19-18	...	...
15-15	...	...	19-19	...	1
16-12	...	...	20-16	...	...
16-13	8	3	20-17	2	3
16-14	4	3	20-18	...	1
16-15	1	4	20-19	...	3
16-16	6	7	20-20	1	2
17-12	...	...	21-16	...	1
17-13	7	5	21-17	3	1
17-14	7	7	21-18	1	...
17-15	2	1	21-19	3	3
17-16	30	17	21-20	7	9
17-17	6	11	21-21	4	1
18-12	...	...	22-16	...	...
18-13	5	...	22-17	5	2
18-14	...	2	22-18	...	1
18-15	...	...	22-19	2	3
18-16	7	14	22-20	6	13
18-17	7	8	22-21	16	6
18-18	2	2	22-22	11	8
19-12	...	...	23-16	...	...
19-13	2	...	23-17	1	2
19-14	...	1	23-18	...	...
19-15	...	...	23-19	1	1
19-16	1	2	23-20	3	9
19-17	...	2	23-21	4	7
19-18	1	1	23-22	11	12
19-19	...	...	23-23	1	...
20-12	...	...	24-16	...	...
20-13	...	...	24-17	...	...
20-14	...	...	24-18	...	...
20-15	...	...	24-19	...	1
20-16	...	...	24-20	2	1
20-17	...	...	24-21	...	1
20-18	1	...	24-22	10	4
20-19	...	...	24-23	3	...
20-20	...	...	24-24	...	...
			25-16	...	...
			25-17	...	...
			25-18	...	...
			25-19	...	...
			25-20	...	1
			25-21	...	...
			25-22	2	...
			25-23	...	...
			25-24	...	...
			25-25	...	...
Total	100	100	Total	100	100

TABLE 2—Allele frequency distributions of *D13S1807* and *D22S693* in two populations.

Allele	D13S1807		D22S693	
	Chinese (<i>n</i> = 100)	Thai (<i>n</i> = 100)	Chinese (<i>n</i> = 100)	Thai (<i>n</i> = 100)
12	0.005	...	...	...
13	0.125	0.065	...	...
14	0.065	0.125	...	...
15	0.015	0.040	...	...
16	0.315	0.285	...	0.005
17	0.325	0.310	0.065	0.065
18	0.125	0.145	0.005	0.010
19	0.020	0.030	0.030	0.070
20	0.005	...	0.110	0.220
21	...	...	0.210	0.150
22	...	...	0.370	0.285
23	...	...	0.125	0.155
24	...	...	0.075	0.035
25	...	...	0.010	0.005
DP	0.871	0.912	0.920	0.930
PE	0.715	0.493	0.637	0.715
PIC	0.720	0.750	0.750	0.790
Het	0.860	0.740	0.820	0.860
HWE test*	<i>P</i> > 0.05	<i>P</i> > 0.05	<i>P</i> > 0.05	<i>P</i> > 0.05

* Probability values; DP: power of discrimination; PE: power of exclusion; PIC: polymorphism information content; Het: heterozygosity.