J Forensic Sci, Nov. 2004, Vol. 49, No. 6
Paper ID JFS2004244
Published 5 Oct. 2004
Available online at: www.astm.org

FOR THE RECORD

Yongchun Xu,[1] *M.D.; Meili Lv,*[1] *Ph.D.; Weibo Liang,*[1] *Ph.D.; Hang Gou,*[1] *M.D.; and Lin Zhang,*[1,2] *Ph.D.*

Allele Frequency Distribution of STR Loci D5S2848 in Four Populations

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

KEYWORDS: forensic science, D5S2845, short tandem repeat, Chinese, Thai, Mongol, Germany

TABLE 1—*Allele frequency distributions of D5S2848 in four populations.*

	Populations			
Allele	Chinese ($n = 100$)	Germany ($n = 100$)	Thai ($n = 100$)	Menggu ($n = 100$)
10	...	...	...	0.035
11	0.040	0.071	0.045	0.105
12	0.025	0.101	0.085	0.170
13	0.215	0.268	0.195	0.385
14	0.385	0.313	0.410	0.235
15	0.260	0.207	0.195	0.045
16	0.075	0.040	0.070	0.025
DP	0.874	0.913	0.885	0.898
Het	0.670	0.707	0.770	0.710
PE	0.383	0.439	0.545	0.4440
PIC	0.690	0.730	0.710	0.720
HWE test*	0.335	0.599	0.374	0.389

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

TABLE 2—*Genotype distributions of D5S2848 in four populations.*

	Populations			
Genotypes	Chinese ($n = 100$)	Germany ($n = 100$)	Thai ($n = 100$)	Menggu ($n = 100$)
10–10	...	...	...	1
11–10	...	...	...	1
11–11	...	1	...	1
12–10	...	2	...	1
12–11	...	...	...	1
12–12	...	...	1	2
13–10	...	...		2
13–11	3	4	3	8
13–12	2	8	2	19
13–13	6	8	3	16
14–10	...	...	...	1
14–11	3	5	6	7
14–12	3	7	8	6
14–13	22	13	23	11
14–14	14	12	12	9
15–10	...	...	...	...
15–11	2	1	...	2
15–12	...	3	5	3
15–13	2	8	5	3
15–14	17	13	15	1
15–15	12	7	5	...
16–10	...	...	...	...
16–11	...	...	...	...
16–12	...	...	...	...
16–13	2	4	...	2
16–14	4	...	6	3
16–15	7	2	4	...
16–16	1	1	2	...
Total	100	100	100	100

Blood Specimens were obtained from 100 unrelated Chinese volunteer donors, 100 unrelated Thai volunteer donors, 100 unrelated Mongol volunteer donors, and 100 unrelated Germany volunteer donors, respectively. DNA samples were extracted from blood specimens using Chelex-100 (1). Genotyping as carried out by PCR in a PE9600 cycler. The components of a 20 μL reaction mixture were as follows: template DNA 20 ng, primer 0.2 μmol/L each, dNTPs 200 μmol/L each, KCl 50 μmol/L, Tris-HCl (pH 8.3) 10 mmol/L, $MgCl_2$ 1.5 mmol/L, and Taq polymerase 1U。 Primer sequences were as follows:

D5S2848 5′-GAAAAGCAGATTGTATTAGTTAGGG-3′
5′-CAGTTTTGGGAATTGGATTG-3′

[1] College of Forensic Medicine, Sichuan University, Chengdu 610041, P. R. China.
[2] Key Lab of Biotherapy of Human Diseases, Ministry of Education, P. R. China.

The research was supported by grants from the Chinese Natural Sciences Fundation (No. 30171033) and the State Ministry of Education (No. 01143), as well as Trans-Century Training Programme Foundation for the Talents by the Ministry of Education Commission (No. 2001-29).

PCR conditions began at 94°C for 5 min, followed by 32 cycles consisting of 40 s at 94°C, 45 s at 56°C, 55 s at 72°C, followed by a 7 min extention 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™ 310 Genetic Analyzer. Data were analyzed by The Promega Software, POWERSTATS.

The complete dataset is available to any interested researcher upon request.

References

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. [PubMed]

Additional information and reprint requests:
Lin Zhang, Ph.D.
College of forensic medicine
Sichuan University
Chengdu, 610041, Sichuan, P. R. China
Phone: 86-28-85460532
Fax: 86-28-85405541
E-mail: kjc@scu.edu.cn