FOR THE RECORD

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Polymorphism of Three Short Tandem Repeat Loci in Chinese Population

POPULATION: Chinese Han.

KEYWORDS: forensic science, Han in Sichuan, China, DNA typing, short tandem repeats, polymerase chain reaction, population genetics, D12S1301, D16S767, D11S1989

Whole blood samples were obtained from unrelated individuals of Chinese Han ethnic group in Chengdu of China. Genomic DNA was extracted using Chelex method (1). PCR amplification conditions can be accessed at http://www.31studio.com/dna. The volume of PCR reaction for each locus was 37.5 μL. The amplified products were separated by horizontal nondenaturing polyacrylamide gel electrophoresis with discontinuous buffer system and visualized by silver staining (2). Data of population genetics and forensic science were analyzed using POWERSTATS program (3). The genotype distribution was analyzed for Hardy–Weinberg equilibrium according to Hou's method (4). No deviation from Hardy–Weinberg equilibrium was observed.

The complete data can be accessed at http://www.31studio.com/dna

TABLE 1—*Allele frequencies of three STR loci in Chinese population.*

Allele	D12S1301 ($n = 109$)	D16S767 ($n = 97$)	D11S1989 ($n = 107$)
9	0.078		0.234
10	0.248		0.178
11	0.014		0.089
12	0.115		0.009
13	0.431	0.098	0.023
14	0.110	0.149	0.187
15		0.366	0.220
16	0.005	0.258	0.056
17		0.119	0.005
18		0.010	
HWE*	$p > 0.05$	$p > 0.05$	$p > 0.05$

*Test for Hardy–Weinberg equilibrium.

TABLE 2—*Population genetics and forensic data of three STR loci.*

Locus	PIC	DP	P_m	EP	H_o	H_e
D12S1301	0.68	0.881	0.119	0.410	0.688	0.728
D16S767	0.72	0.887	0.113	0.569	0.784	0.761
D11S1989	0.79	0.939	0.061	0.555	0.776	0.826

PIC, polymorphism information content; DP, power of discrimination; P_m, probability of match; EP, power of exclusion; H_o, observed heterozygosity; H_e, expected heterozygosity.

References

1. Walsh BS, Petzger DA, Higuchi R. Chelex-100 as medium for simple extraction of DNA for PCR-based typing from forensic material. Biotechniques 1991;10:506–10.
2. Allen CR, Graves G, Budowle B. Polymerase chain reaction amplification products separated on rehydratable polyacrylamide gels and stained with silver. Biotechniques 1990;7:736–44.
3. http://www.promega.com
4. Hou Y, Prinz M, Staak M. Comparison of different tests for deviation from Hardy–Weinberg equilibrium of AMPFLP population data. In: Bar W, Fiori A, Rossi U, editors. Advances in forensic haemogenetics. Berlin: Springer-Verlag; 1994:511–4.

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