

FOR THE RECORD

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Allele Frequencies for Three STR Loci D3S4551, D11S4465, and D18S973 in Chinese Population

POPULATIONS: Chinese Han.

KEYWORDS: forensic science, Han in Sichuan, China, DNA typing, short tandem repeats, polymerase chain reaction, population genetics, D3S4551, D11S4465, D18S973

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). Polymerase chain reaction (PCR) amplification conditions can be accessed at www.legalmed.org/dna/d3s4551.htm or www.fayi.cn/dna/d3s4551.htm. The volume of PCR reaction for each locus was 25 μ L. The amplified products were separated by vertical nondenaturing polyacrylamide gel electrophoresis with continuous buffer system and visualized by silver staining (Table 1) (2). Data of population genetics and forensic science were analyzed using POWER-STATS program (3). The genotype distribution was analyzed for Hardy–Weinberg equilibrium according to Hou’s method (4).

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

Allele	Frequency		
	D3S4551 (n = 100)	D11S4465 (n = 100)	D18S973 (n = 100)
9			0.25
10	0.01		0.48
11	0.30		0.18
12	0.22		0.06
13	0.27	0.005	0.03
14	0.13	0.03	
15	0.05	0.16	
16	0.02	0.525	
17		0.155	
18		0.09	
19		0.02	
20		0.01	
21		0.005	
Total	1.0000	1.0000	1.0000
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
D3S4551	0.73	0.906	0.094	0.460	0.720	0.773
D11S4465	0.63	0.844	0.156	0.291	0.600	0.669
D18S973	0.62	0.840	0.160	0.303	0.610	0.674

*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.

No deviation from Hardy–Weinberg equilibrium was observed (Table 2).

The complete data can be accessed at www.legalmed.org/dna/d3s4551.htm or www.fayi.cn/dna/d3s4551.htm

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