

# A POPULATION GENETIC STUDY OF THREE STRs LOCI IN A CHINESE HAN POPULATION IN CHENGDU, PR CHINA

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We have surveyed a Chinese Han population in Chengdu, PR China with three STR loci of DHFRP<sub>2</sub>, FIBRA, and ACTBP<sub>2</sub> located on the human chromosome 6, 4q28 and 6 respectively by using both single PCR, PAGE and silver stain as well as triplexing out. The distribution of alleles (table), genotypes observed, H, DP, PIC, and EPP were calculated. A new allele A 9.2 of DHFRP<sub>2</sub> with size of 177 bp was firstly found. The sequence study demonstrated that the 84th nucleotide C on the basic sequence was replaced by T and A, A on both 140th, 141th positions were deleted. The number of cases studied observed genotypes, H, DP, PIC, and EPP of DHFRP<sub>2</sub>, FIBRA, and ACTBP<sub>2</sub> were as follows: 156, 19, 0.61, 0.87, 0.68, 0.46; 136, 44, 0.90, 0.96, 0.86, 0.86; 147, 86, 0.97, 0.99, 0.95, and 0.93. The distribution of their genotypes were in good agreement with HWE. The family study demonstrated that these three loci were in conformity with the Mendel's law. Triplexing of these three loci was achieved. The matching probability of these three loci was  $7.6 \times 10^{-5}$ . Tissues taken from animals of nine different kind species were used for the species specificity test. The results showed that no PCR products were found only in ACTBP<sub>2</sub> locus. Nine species of animals tested were as follows: rabbit, pig, cow, cat, snake, chicken, rat frog, and fish. The results of 5 cases of paternity testing and personal identification of biological evidences were correct.

Table Allele distributions of DHFRP<sub>2</sub>, FIBRA, and ACTBP<sub>2</sub> loci

DHFRP <sub>2</sub>	DHFRP <sub>2</sub>	FIBRA	FIBRA	ACTBP <sub>2</sub>	ACTBP <sub>2</sub>
Allele	Frequencies	Allele	Frequencies	Allele	Frequencies
A6	0.0665	A9	0.0037	A16	0.0034
A7	0.4359	A11	0.0184	A17	0.0068
A8	0.266	A12	0.0772	A18	0.0068
A9	0.0449	A13	0.0588	A19	0.0102
A9.2	0.0256	A14	0.1471	A20	0.0408
A10	0.141	A14.2	0.0037	A21	0.0782
		A15	0.1691	A22	0.0952
		A16	0.2059	A23	0.0714
		A16.2	0.0184	A24	0.051
		A17	0.1654	A25	0.0816
		A17.2	0.011	A26	0.0578
		A18	0.0846	A27	0.0408
		A18.2	0.0037	A28	0.051
		A19	0.011	A29	0.0544
		A20	0.0147	A30	0.0578
		A21	0.0074	A31	0.1054
				A32	0.0578
				A34	0.0816
				A36	0.0442
				A38	0.0032

