STR Analysis - HUMTH01 and HUMFES/FPS for Forensic application

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The tetrameric short tandem repeat loci HUMTH01 and HUMFES/FPS were studied.

Population and sample size: Portugal (South) N: 124

Methods: Amplification was performed according to EDNAP protocol (Kimpton et al.)

Electrophoretic methods: 6% polyacrilamide denaturing gel electrophoresis (Lango et al.). The gels were run for 120min. at 800V on the ALF DNA Sequencer. Typing was performed by comparison with allelic ladders.

Results:

HUMTH01 Allele Frequencies

Allele	Frequency	Allele	Frequency	Allele	Frequency
3	0.0040	7	0.1532	9.3	0.2742
5	0.0040	8	0.1452	10	0.0081
6	0.1935	9	0.2097	11	0.0081

X^2 = 9.6092 df = 10 0.30 < p < 0.50 CE = 0.5820 HI = 0.79

HUMFES/FPS Allele Frequencies

Allele	Frequency	Allele	Frequency	Allele	Frequency
8	0.0161	11	0.3952	14	0.0040
9	0.0040	12	0.2460		
10	0.2823	13	0.0524		

X^2 = 8.7928 df = 10 0.50 < p < 0.70 CE = 0.441 HI = 0.70

Comments:

Eigth alleles for HUMTH01 (154-178 bp) and seven for HUMFES/FPS (213-238 bp) were observed.

A HUMTH01 smaller allele (145.7 bp) was found and designated as 3 n° of repeats.

The two markers were in genetic equilibrium according to Hardy-Weinberg. HUMTH01 and HUMFES/FPS loci have a similar allele distribution to other already published Caucasian population groups.

References:

Walsh P. et al. Biotechniques 10: 506-513 (1991)
Lango A. et al. Adv.For.Haemogent. 5: 109-111 (1993)
Kimpton C. et al. For.Sci.Int. 71: 137-152 (1995)