A new TaqI RFLP at the DXS17 locus (S9) in the black population

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Source/Description: S9 is a 7.0 kb fragment subcloned from S21 into the EcoRI site of pUC 18. S21 is a single-copy DNA sequence isolated from a human X chromosome-specific DNA library.

Polymorphism: TaqI digestion reveals polymorphic fragments of 2.75 kb (A1), 2.65 kb (A2) and 1.97 kb, 1.05 kb (A3) in blacks.

Frequency: Studied in 31 unrelated black individuals, with a total of 56 X chromosomes.

	BLACK	CAUCASIANS ¹
2.75 kb (A1)	0.47	0.65
2.65 kb (A2)	0.30	0.35
1.97 kb, 1.05 kb (A3)	0.23	

Chromosomal Localization: S21 was shown to exhibit X-linked inheritance through pedigree analysis. Linkage was then shown between S21 and DXYS 1 localizing S21 to Xq21.3-Xq22 (Drayna *et al.*, 1984).

Mendelian Inheritance: Exhibited X-linked inheritance in 3 fragile X families. The 1.97 kb and 1.05 kb fragments segregate dependently as a single allele (A3), and independently from the 2.75 kb A1 and 2.65 kb A2 alleles.

Probe Availability: Contact K.E. Davies, Molecular Genetics Group, Institute of Molecular Medicine, John Radcliffe Hospital, Headington, Oxford OX3 9DU, UK.

Other Comments: Comparison of the new allele frequencies in the black population to the previously published allele frequencies in the caucasian population would suggest that the new allele observed in the blacks is derived from A1. The heterozygote frequencies in our black population were 0.32 for A1/A2, 0.08 for A1/A3, and 0.08 for A2/A3.

Acknowledgements: We thank Dr. K.E. Davies for sending us the S9 probe. Supported by grants from the Self Foundation and The South Carolina Department of Mental Retardation.

References: 1) Drayna *et al.* (1984) *Proc. Natl. Acad. Sci. USA* **81**, 2836–2839. 2) Brunner *et al.* (1988) *Hum. Genet.* **80**, 337–340.

An MspI RFLP in the human ADH5 gene

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Source/Description: A 2064 bp fragment (30L) of the ADH5 gene was isolated from a human testicular cDNA library and cloned into pBluescript vector (Sharma *et al.*, 1989). The fragment was excised by EcoRI digestion.

Polymorphism: MspI identifies a 2 allele polymorphism. A1: 5.7 kb, A2: 3.5 kb and 2.2 kb. The 3.5 kb band is superimposed on a constant band. The 5.7 kb band is close to a constant band at 5.5 kb.

Frequency: Estimated on 19 unrelated Caucasians MspI A1 allele: 53%; MspI A2 allele: 47%

Not Polymorphic For: ApaI, EcoRI, HindIII, ScaI (tested on 8 unrelated individuals).

Chromosomal Localisation: Localised to chromosome 4q21–4q25 (Carlock *et al.*, 1985).

Mendelian Inheritance: Co-dominant segregation was found in one 3-generation family (14 individuals).

Probe Availability: 30L available from ATCC.

Other Comments: The ADH5 gene product, class III alcohol dehydrogenase, has been suggested to be identical to formaldehyde dehydrogenase (Koivusalo *et al.*, 1989).

Acknowledgements: This work was supported by a grant from the Samuel Bronfman Foundation, Inc., with funds provided by Joseph E. Seagram and Sons, Inc.

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