***TaqI* RFLP identified by probe 1A1 [DXS374] at Xq28**

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SOURCE/DESCRIPTION : 1A1 is a *PstI* fragment of single copy DNA which detects a *PstI* restriction fragment length polymorphism (RFLP) at *DXS374* (Patterson MN et al, 1989).

POLYMORPHISM : A second RFLP was observed using *TaqI* (New England Biolabs). The sizes of the three constant bands detected were 2.4kb and, more faintly, 7.2kb and 8.3kb. The polymorphic band sizes were 4.5kb (B1) and 4.0kb (B2).

FREQUENCY : In a sample of 27 chromosomes from unrelated Utah individuals the common allele (B1) had a frequency of 0.81. In a sample of 22 haplotypes from unrelated Utah individuals the *PstI* and *TaqI* polymorphisms had a disequilibrium constant of 0.02 (Ott J, 1985).

NOT POLYMORPHIC FOR : *MspI*, *SacI*, *BglII*, *EcoRI*, *HindIII*, or *PvuII* (12 chromosomes each).

CHROMOSOMAL LOCALISATION : On the basis of genetic linkage studies 1A1 has been localised to the interval *FRAXA-DXS52* at Xq28 (Patterson MN et al, 1989). On *in situ* hybridisation of 1A1 to chromosomes expressing the rare folate-sensitive fragile site at Xq27.3 (*FRAXA*) there were 30 grains proximal to the fragile site and 55 grains distal ($p < 0.05$). This physical localisation confirmed that 1A1 lay distal to the fragile site.

MENDELIAN INHERITANCE : Co-dominant inheritance of the *TaqI* RFLP was documented in the three generation CEPH pedigree, 13293.

PROBE AVAILABILITY : The probe is available from KED.

OTHER COMMENTS : *TaqI* RFLPs have now been identified for *F9*, *DXS105*, *DXS52* (Pearson PL et al, 1987), and *DXS374* which are all located in the region Xq27-q28 near *FRAXA*. Radio-labelled 1A1 can give some diffuse lane background when hybridised to a Southern blot but this background rarely obscures the polymorphic bands.

REFERENCES : Patterson MN et al (1989), Genomics (in press); Ott J (1985), Analysis of Human Genetic Linkage, Baltimore : The Johns Hopkins University Press, p151; Pearson PL, Kidd KK, & Willard HF (1987), Cytogenet. Cell Genet. 46: 390-566.

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