p49f, a highly polymorphic probe, that detects TaqI RFLPs on the human Y chromosome

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SOURCE AND DESCRIPTION OF CLONE: Cosmid 49 (Bishop et al., Nature 1983, 303:831-832) belonging to locus *DYS1* has been isolated by sub-cloning DNA fragments of the cosmid insert; probe p49f is a 2.8 kb EcoRI fragment.

POLYMORPHISM: Bands A and D exhibit variation in size or are absent (allele A4:17 kb A3:15 kb, A2:12 kb, A1:10 kb or A0; alleles D1:7.2 kb, D2:6 kb or D0), and bands C, F and I are present or absent (C1=8.1 kb or C0; F1=5.4 kb or F0; I1=3.5 kb or I0).

FREQUENCIES: Studied in about 100 Caucasians, Asiatics or Orientals. 44 of them are retained for haplotypes frequencies. For the different alleles frequencies are: 17 kb allele (A4): 0.04; 15 kb allele (A3):0.68; 12 kb allele (A2):0.18; A0:0.18; 7.2 kb allele (D1):0.54; 6 kb allele (D2):0.22; D0:0.22; 8.1 kb allele (C1):0.36; C0:0.63; 5.4 kb allele (F1):0.97; F0:0.03; 3.5 kb allele (I1):0.63; I0:0.36.

NOT POLYMORPHIC FOR: EcoRI, HindIII, PstI, PvuII, BamHI, all with a panel of 10-20 unrelated Caucasians.

CHROMOSOMAL LOCALISATION: Probe located to a sub-region of Yq11.

MENDELIAN INHERITANCE: Co-dominant segregation of alleles in several informative families, 24 individuals.

PROBE AVAILABILITY: Available for collaboration, after permission.

OTHER COMMENTS: No problem on RFLP analysis under normally stringent conditions. This probe detects up to 18 Taq I bands, among those bands K and L were also present in female digests, whereas the remaining bands were Y-specific.

REFERENCE: Lucotte et al., Am.J. Hum. Genet. 1986 (in press).