RFLPs for the human alphafetoprotein (AFP), at 4q11-4q13

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SOURCE AND DESCRIPTION OF CLONE: pHAF2 and pHAF7 are two cDNA clones in pBR322 corresponding to 3' and 5' portions of the alphafetoprotein gene, respectively (Morinaga et al., 1983).

POLYMORPHISM: Ava II identifies one invariant band of about 10kb and a polymorphic band at either 2.5kb or 1.5kb with the 5' probe pHAF2. Pst I identifies one invariant band at 6kb and polymorphic bands at 15kb and 12kb with pHAF7.

FREQUENCY: Studied in 50 American Caucasoids:

Ava II 2.5kb allele 0.58
Ava II 1.5kb allele 0.42.
Pst I 15kb allele 0.12
Pst I 12kb allele 0.88

NOT POLYMORPHIC FOR: BamHI, BclI, BglI, BglII, EcoRI, EcoRV, HaeIII, HgiAI, HincII, HindIII, HinfI, KpnI, MspI, MstII, PvuII, RsaI, SacI, SauIIIA, StuI, TaqI, XbaI, XmnI, all with a panel of 10 unrelated Caucasoids.

CHROMOSOMAL LOCALISATION: AFP is approximately 15kb from albumin at 4q11-4q13 (Urano et al., 1984).

MENDELIAN INHERITANCE: Co-dominant segregation pattern has been observed in three families for the Ava II polymorphism and in ten families for the Pst I polymorphism.

PROBE AVAILABILITY: Available for collaboration from T. Tamaoki.

OTHER COMMENTS: There appears to be strong linkage disequilibrium of the Ava II polymorphism with several of the polymorphisms previously described at the albumin locus (Murray et al., 1984). There is little linkage disequilibrium of the Pst I polymorphism with albumin polymorphisms.

REFERENCE: Urano et al., (1984) *Gene* 32, 255-261.
Morinaga et al., (1983) *Proc. Natl. Acad. Sci. USA*. 80, 4604-4608.
Murray et al., (1984) *Proc. Natl. Acad. Sci. USA*. 81, 3486-3490.

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