Cosmid 1-26 defines four RFLPs on chromosome 17q23-qter [HGM9 No. D17S20]

N.E.Buroker, S.Kondoleon, P.vanTuinen¹, D.H.Ledbetter¹ and M.Litt

Oregon Health Sciences University, Portland, OR and ¹Baylor College of Medicine, Houston, TX, USA

SOURCE AND DESCRIPTION OF CLONE. Cosmid 1-26 was isolated from a random human genomic library cloned in the K^{os}I vector (Tet^r). A 7.6 kb TaqI fragment of the cosmid was used as the probe.

POLYMORPHISMS: TaqI identifies a 2-allele RFLP with A1=7.6, A2=4.9+2.7 kb. BglII identifies constant bands of 2.85 and 0.8 kb; a 2-allele RFLP with B1=26, B2=18 kb and a 3 allele RFLP with C1=2.70, C2=2.25, C3=1.60 kb. EcoRI identifies constant bands of 15 and 6 kb and a 2-allele RFLP with D1=2.9, D2=2.5 kb. The D locus is an insertion/deletion RFLP which is also detected with BamHI and BstEII.

FREQUENCIES: Studied 38 European Caucasians. A1=.72, A2=.28; B1=.29, B2=.71; C1=.30, C2=.023, C3=.68; D1=.34, D2=.66.

CHROMOSOMAL LOCALIZATION: 17q23-qter, by use of somatic cell hybrid panels.

MENDELIAN INHERITANCE: Codominant inheritance has been shown at each of the four loci in at least 2 informative families with a total of at least 13 children.

PROBE AVAILABILITY: Available from ATCC.

OTHER COMMENTS: The probe must be prehybridized with excess human DNA to compete out hybridization of repeated sequences. Loci A, C and D are in strong linkage disequilibrium. Of 40 unrelated individuals tested, 29 (72%) were heterozygous at one or more of the 4 loci.

REFERENCE: M. Litt and R. White (1985) PNAS USA 82:6206-6210.

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