Isolation and mapping of a polymorphic DNA sequence (cYNA13) on chromosome 1 [D1S74]

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SOURCE/DESCRIPTION: This cosmid cYNA13 was isolated with YNH24 oligonucleotide (GGAGCAGTGGGNNNTACA) (1) from human genomic cosmid library.

POLYMORPHISM: MspI identifies a more than 10 allele VNTR polymorphism with bands between 2.0 kb and 7.0 kb. RsaI, TaqI, BglII, PstI and PvuII also detect the same polymorphism.

HETEROZYGOSITY: 96% heterozygosity was observed in 106 unrelated Caucasians.

NOT POLYMORPHIC FOR: None detected

CHROMOSOMAL LOCALIZATION: This probe has been assigned to distal chromosome 1q by multipoint linkage analysis (2) with loci (NRAS, PGM1, RH) known to span this region (3)

MENDELIAN INHERITANCE: Co-dominant segregation demonstrated in 53 three generation families.

PROBE AVAILABILITY: Freely available (contact Y.N.) or will be available from ATCC.

OTHER COMMENTS: RFLPs were observed after competitive hybridization with total human DNA.

REFERENCES:
1. Y. Nakamura et al., submitted
2. G.M. Lathrop et al., Am. J. Hum. Genet. 37:482-498 (1985)
3. P. O'Connell et al., Cytogenet. Cell Genet. 46:672 (1988)