Isolation and mapping of a polymorphic DNA sequence (pYNZ2) on chromosome 1p [D1S57]

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SOURCE/DESCRIPTION: A 3.0 kb HindIII fragment from the cosmid cYNZ2 isolated with zetaglobin oligonucleotide (1) was subcloned into the HindIII site of pBR322.

POLYMORPHISM: MspI identifies a >8 allele VNTR polymorphism with bands between 1.0 kb and 3.0 kb. RsaI, TaqI, BglII, PstI, PvuII, EcoRI, BamHI and HindIII also detect the same polymorphism.

HETEROZYGOSITY: 65% heterozygosity was observed in 104 unrelated Caucasians.

NOT POLYMORPHIC FOR: None detected

CHROMOSOMAL LOCALIZATION: This probe has been assigned to distal chromosome 1p by multipoint linkage analysis (2) with loci (NRAS, PGM1, RH) known to span this region (3,4)

MENDELIAN INHERITANCE: Co-dominant segregation demonstrated in more than 52 three generation families.

PROBE AVAILABILITY: Available from the ATCC. Or contact Y.N..

OTHER COMMENTS: RFLPs were observed under normal conditions of hybridization and washing.

REFERENCES:

1. Y. Nakamura et al., Science 235: 1616-1622 (1987)
2. G.M. Lathrop et al., Am. J. Hum. Genet. 37:482-498 (1985)
3. S. Povey et al., Cytogenet. Cell Genet. 40:67-106(1985)
4. P. O'Connell et al., abstract submitted to the Human Gene Mapping Workshop 9