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Isolation and mapping of a polymorphic DNA sequence (pTHH59) on chromosome 17q [D17S4]

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SOURCE/DESCRIPTION: A 3.8 kb PstI fragment from the cosmid THH59 identified by the HBV-1 oligonucleotide (1) was subcloned into the PstI site of pBR322.

POLYMORPHISM: PvuII resolves a 6 allele VNTR polymorphism with bands between 0.8 kb and 1.8 kb. TaqI resolves this system almost as well, with alleles between 3.0 - 4.0 kb. RsaI, PstI and EcoRI also detect the same polymorphism.

HETEROZYGOSITY: With PvuII, 76% heterozygosity was observed in 100 unrelated Caucasians.

NOT POLYMORPHIC FOR: BglII

CHROMOSOMAL LOCALIZATION: This probe is assigned to chromosome 17 by somatic cell hybrid analysis and to 17q by multipoint linkage analysis(2) to a locus (TK1) known to be in this region of chromosome 17(3,4).

MENDELIAN INHERITANCE: Co-dominant segregation of this VNTR polymorphism has been observed in 50 three generation families.

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

OTHER COMMENTS: RFLPs were observed under normal hybridization stingency.

REFERENCES:

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2. G.M. Lathrop et al., Am. J. Hum. Genet. 37:482-498 (1985)
3. S. Naylor et al., Cytognet. Cell Genet. 40:242-267 (1985)
4. Y. Nakamura et al., abstract submitted to the Human Gene Mapping Workshop 9