A highly polymorphic locus is detected by probe CARLP II6.3 [D5S88]

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SOURCE AND DESCRIPTION : A single copy clone CARLP II6 was isolated from a genomic human λ Charon 4A phage library (1) using nick translated total human DNA. This clone contained a 16kb insert of which a 3kb EcoRI fragment was subcloned in pUC18 and designated CARLP II6.3.

POLYMORPHISMS : CARLP II6.3 recognizes the same diallelic polymorphism on EcoRI, HindIII, MspI, BamHI, PvuII, StuI and SacI Southern blots. The polymorphism is presumably caused by an insertion/deletion event. For example after HindIII digestion fragments of 9 kb (allele H1) and/or 5.5 kb (allele H2) are generated.

On TaqI Southern blots however CARLP II6.3 recognizes a highly polymorphic locus with at least 4 different alleles. Fragmentlengths are 20 kb (T1), 13 kb (T2), 10 kb (T3) and 7 kb (T4).

FREQUENCIES : Allele frequencies were calculated from 46 unrelated Belgian individuals for the HindIII polymorphism and on 77 individuals for the TaqI polymorphism.

HindIII	H1	0.30	TaqI	T1	0.17
	H2	0.70		T2	0.02
				T3	0.26
	PIC = 0.42			T4	0.55

PIC = 0.54

OTHER ENZYMES TESTED : CARLP II6.3 was not polymorphic for BglII and PstI on 6 to 10 unrelated individuals.

CHROMOSOMAL LOCALIZATION : Somatic cell hybrids were used to map CARLP II6.3 to chromosome 5.

MENDELIAN INHERITANCE : Co-dominant segregation of the TaqI alleles was observed in 3 extended pedigrees on 170 pedigree members.

PROBE AVAILABILITY : Free available, contact P.R.

REFERENCES : (1) Lawn, R.M. *et al* (1978) Cell **15**, 1157-1174.

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