Trinucleotide repeat polymorphism at the human met-tRNA-i gene 1 (TRMI)

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Source/Description: The polymorphic (AAC)_n repeat begins at base pair 45 of the human met-tRNA-i gene 1 on chromosome 6p23-q12 (TRMI) (1). The polymorphism can be typed using the polymerase chain reaction (PCR) as described previously (2). The predicted length of the amplified sequence was 177 bp.

Primer Sequences:

GGAAAGAAACAGTGAAAGA (AAC strand);
ATCCATCGACCTCTGGGTTA (TTG strand).

Frequency: Estimated from 48 chromosomes of unrelated individuals.

Heterozygosity Index = 54%. PIC = 0.50.

Allele (bp)	Frequency
A1 186	0.04
A2 183	0.17
A3 180	0.65
A4 177	0.06
A5 174	0.08

Mendelian Inheritance: Co-dominant segregation was observed in two informative families.

Chromosomal Localization: The human met-tRNA-i gene 1 (TRMI) has been assigned to chromosome 6p23-q12 (3).

Other Comments: The PCR reaction was performed on 80 ng of genomic DNA using 100 pmoles of each oligonucleotide primer. The samples were processed as described (4) except that the denaturation cycle at 94°C was extended to 1.4 minutes. The trinucleotide repeat was based on a (AAC)₈ sequence.

References: 1) Santos, T. *et al.* (1981) *Cell* **23**, 699–709. 2) Weber, J.L. and May, P.E. (1989) *Am. J. Hum. Genet.* **44**, 388–396. 3) Naylor, S.L. *et al.* (1983) *Proc. Natl. Acad. Sci. USA* **80**, 5027–5031. 4) Weber, J.L. *et al.* (1990) *Nucl. Acids Res.* **18**, 4637.

Tetranucleotide repeat polymorphism at the human coagulation factor XIII A subunit gene (F13A1)

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Source/Description: The polymorphic (AAAG)_n repeat begins at base pair 248 in intron A of the human coagulation factor XIII A subunit gene on chromosome 6p24-p25 (F13A1) (1). The polymorphism can be typed using the polymerase chain reaction (PCR) as described previously (2). The predicted length of the amplified sequence was 195 bp.

Primer Sequences:

GAGGTTGCACTCCAGCCTTT (AAAG strand);
ATGCCATGCAGATTAGAAA (TTTC strand).

Frequency: Estimated from 48 chromosomes of unrelated individuals. Observed heterozygosity = 78%. PIC = 0.75.

Allele (bp)	Frequency	Allele (bp)	Frequency
M1 230	0.02	M5 192	0.29
M2 226	0.02	M6 188	0.25
M3 200	0.06	M7 184	0.11
M4 196	0.23	M8 180	0.02

Mendelian Inheritance: Co-dominant segregation was observed in two informative families.

Chromosomal Localization: The human coagulation factor XIII A subunit gene (F13A1) has been assigned to chromosome 6p24-p25 (3).

Other Comments: The PCR reaction was performed on 80 ng of genomic DNA using 100 pmoles of each oligonucleotide primer. The samples were processed as described (4) except that the denaturation cycle at 94°C was extended to 1.4 minutes. The tetranucleotide repeat was based on a (AAAG)₇ sequence.

References: 1) Ichinose, A. *et al.* (1988) *Proc. Natl. Acad. Sci. USA* **85**, 5829–5833. 2) Weber, J.L. and May, P.E. (1989) *Am. J. Hum. Genet.* **44**, 388–396. 3) Board, P.G. *et al.* (1988) *Cytogenet. Cell Genet.* **48**, 25–27. 4) Weber, J.L. *et al.* (1990) *Nucl. Acids Res.* **18**, 4637.