The human osteonectin gene (OSN) has TaqI and MspI polymorphisms

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SOURCE/DESCRIPTION: A 0.54kb cDNA subcloned in pUC19 originally from a λ gt11 library of a human osteosarcoma cell. The clone obtained by immunoscreening with a bovine osteonectin antibody contains 50 bp of 5' noncoding sequence followed by a 17 amino acid leader peptide and 146 residues of mature osteonectin (1).

POLYMORPHISM: Taq I digestion of genomic DNA detects three alleles of 5.2,^(A1) 4.9,^(A2) and 3.3kb^(A3). There are invariant bands of 4.4, 3.1, and 1.1 kb. MspI digestion produces two alleles of 4.6^(B1) and 3.9kb^(B2). Invariant bands of 1.6, 1.5, and 1.2 kb are also detected.

FREQUENCY: TaqI (14 unrelated Caucasians): A1 0.72 A2 0.14 A3 0.14
MspI (33 unrelated Caucasians): B1 0.43 B2 0.57

Haplotype frequency:

A1	B1	0.35	A2	B2	0.10
A1	B2	0.40	A3	B1	-
A2	B1	0.05	A3	B2	0.10

NOT POLYMORPHIC FOR: EcoRI, BamHI, HindIII

CHROMOSOMAL LOCALISATION: In 19 cell hybrids, osteonectin segregated with chromosome 5 with no exceptions. Also, Swaroop et al. (2) have mapped this gene and place it at 5q31-q33 by in situ hybridization.

MENDelian INHERITANCE: Codominant segregation observed in 8 families (42 individuals).

PROBE AVAILABILITY: Available for collaborators.

REFERENCE: 1. Villarreal et al., (1989). Biochemistry 28:in press.
2. Swaroop et al., (1988). Genomics 2:37-47.

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FIGURE 1: A. TaqI digest
B. MspI digest