Two RFLPs in the 5' end of the human osteonectin (ON) gene

Robin C.Schwartz, Marian F.Young¹ and Petros Tsipouras

University of Connecticut Health Center, Department of Pediatrics, Farmington, CT and ¹Bone Research Branch NIDR/NIH, Bethesda, MD, USA

SOURCE/DESCRIPTION: ON 164, a 550 base pair cDNA clone at the 5' end of the human osteonectin gene.(Termine, J. et al, 1988). The insert is an EcoRI fragment inserted into Bluescript.

POLYMORPHISM : HincII identified a simple two allele polymorphism with a band at either 14 kb or 12.5 kb. TaqI identified a simple two allele polymorphism with a band at either 4.9 or 4.6kb.

FREQUENCY : 18 and 26 unrelated individuals from the CEPH (Dausset, J. 1986) panel were studied for the HincII and TaqI polymorphisms respectively. Hinc II polymorphism: 14kb allele (A1):0.64 (+/-)0.12 12.5 kb allele (A2): 0.36 (+/-)0.12 TaqI polymorphism: 4.9 kb allele (B1):0.85 (+/-)0.06 4.6 kb allele (B2):0.15 (+/-)0.06

NOT POLYMORPHIC FOR : Hind III, BamHI, PstI, BglII, RsaI

CHROMOSOMAL LOCALISATION : 5q31→5q33 Swaroop, A. et al.Genomics (1988) 2, 37-47.

MENDELIAN INHERITANCE: Autosomal dominant inheritance was demonstrated in 2 kindreds of 8 individuals for each polymorphism.

PROBE AVAILABILITY Available. Contact M. Young.

OTHER COMMENTS : Possible low frequency polymorphism detected with MspI.

REFERENCE : 1.Termin, J.D., Day, A.A., Fisher, L.W., Young, M.F: Inter. Assoc. Dental Res. (1988) 67, 290. 2. Dauset, J. Presse Med (1986) 15, 1801-1802.

ACKNOWLEDGEMENTS : This study was supported in part by a grants to P.T., #AR-1224 from the National Institutes of Health.