D4S35 and D4S103 identify the same locus and MspI RFLP

Thomas C.Hart* and Scott R.Diehl

Department of Human Genetics, PO Box 33, MCV Station, Richmond, VA 23298, USA

Source/Description: Clone G9 (D4S35) contains a ca. 16 kb fragment of human genomic DNA (1). Clone CRI-L1190 (D4S103) contains a ca. 15 kb fragment of human genomic DNA (2).

Polymorphism: Both of these probes detect the identical MspI two allele systems: A1 = 22 kb, A2 = 19 kb, B1 = 5.5 kb, B2 = 5.2 kb.

Frequency: Among 25 unrelated African American individuals.
A1 = .22
A2 = .78
B1 = .24
B2 = .76

Chromosomal Localization: HGM10 localized D4S103 to chromosome 4, and D4S35 to 4p11-q11.

Mendelian Inheritance: Identical segregation as codominantly inherited alleles was demonstrated with both of these probes in 6 families (101 individuals).

Probe Availability: G9 available from the ATTC. CRI-L1190 available from Collaborative Research Inc.

Other Comments: When G9 and CRI-L1190 are EcoRI digested, each yields the appropriate vector arms of 22 kb, and 12 kb. G9 also yields 5.7 kb, 5.05 kb, and a 5.0 kb fragments. CRI-L1190 yields 6.2 kb, 5.05 kb and 3.7 kb fragments (see Figure 1). Clone blotting experiments indicate both probes contain portions of identical DNA, for example both clones contain a 5.05 kb EcoRI fragment which cross-hybridizes to the alternate probe (see Figure 2). Clone blotting experiments also demonstrated cross-hybridization between the G9 5.0 kb fragment and the CRI-L1190 3.7 kb fragment, and between the G9 5.7 kb fragment and the CRI-L1190 6.2 kb fragment. Based on these data and the fact that both probes detect the same MspI polymorphism we conclude that they detect the same locus.

Acknowledgements: Supported by NIDR grants DE00151 and DE08972.

References: 1) Scambler *et al.* (1985) *Hum. Genet.* **69**, 250–254. 2) Donis-Keller *et al.* (1987) *Cell* **51**, 319–327.

Figure 1. 1. CRI-L1190. 2. G9.

Figure 2. 1. CRI-L1190. 2. G9 probe is CRI-L1190 5.05 kb fragment.

A polymorphism of the MYH7 gene

M.A.Siewertsen, H.-P.Vosberg¹ and D.W.Cox*

Research Institute, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8, Canada and ¹Department of Cell Physiology, Jahnstrasse 29, Max-Planck-Institut für Medical Research, D-6900 Heidelberg, FRG

Source/Description: A single copy 4.6 kb EcoRI fragment from clone pSC14 (1) specific for human myosin heavy chain polypeptide beta subunit at the locus MYH7.

Polymorphism of the MYH gene detected with BamHI. Presence of a 3.5 kb fragment or its 1.6 kb allele (fragments of 15.5 and 17 kb are constant) (see Figure).

Frequency: Studied in DNA from 76 parents in CEPH families:
A1 (3.5 kb): 0.71
A2 (1.6 kb): 0.29

Not Polymorphic For: AvaII, BglI, BglII, EcoRI, HincII, HindIII, MspI, PvuII, RsaI, SalI, TaqI, XbaI, HaeIII, BstEII, or PstI in digests of DNA from 7 unrelated individuals.

Chromosomal Localization: q11.2-q24.3 (2, 3).

Mendelian Inheritance: Codominant segregation shown in 13 three-generation families (156 individuals).

Probe Availability: Write to H.-P.Vosberg.

Other Comments: Wash stringency of 0.1% SDS, 0.1×SSC, at 60°C.

Acknowledgement: This study was supported by a grant from the Medical Research Council of Canada.

References: 1) Diederich, K.W. *et al.* (1989) *Hum. Genet.* **81**, 214–220. 2) Cox, D.W. *et al.* (1989) HGM 10. *Cytogenet. Cell Genet.* **51**, 980. 3) Matsuoka, R. *et al.* (1989) *Am. J. Med. Genet.* **32**, 279–284.

* To whom correspondence should be addressed

* To whom correspondence should be addressed