Isolation and mapping of a polymorphic DNA sequence (CJ52.197) on chromosome 16 [D16S156]

C.Julier*, Y.Nakamura, G.M.Lathrop*, J.-M.Lalouel and R.White

Howard Hughes Medical Institute, University of Utah Medical School, Salt Lake City, UT 84132, USA

SOURCE/DESCRIPTION: Cosmid CJ52.197 was isolated from a library constructed from a mouse/human somatic cell hybrid that contains a chromosomellq-16q derivative as the only human chromosome (1). The Sau3A partial digest was inserted into pWe vector.

POLYMORPHISM: TaqI identifies two polymorphic systems.

A: T1 : 4.4 kb, T2 : 3.6 kb 1.6 kb

B: T1 : 1.3 kb, T2 : 1.25 kb 1.2 kb

System A is an insertion/deletion type VNTR and is also detected with MspI and PstI, and probably other enzymes. The origin of system B is unknown.

FREQUENCY: Estimated from 96 unrelated Caucasians.

TaqI system A T1 : 0.84

T2 : 0.16

TaqI system B T1 : 0.87

T2 : 0.12

T3 : 0.01

NOT POLYMORPHIC FOR: not known.

CHROMOSOMAL LOCALIZATION: CJ52.197 has been assigned to chromosome 16 by multipoint linkage analysis (2) with loci known to map on this chromosome (1).

MENDELIAN INHERITANCE: Codominant segregation of the TaqI RFLPs was observed in 48 three generation families.

PROBE AVAILABILITY: Contact C.J.

OTHER COMMENTS: This probe contains repetitive DNA sequences, and needs to be used in the presence of an excess of total human DNA in the prehybridization and hybridization mixtures.

REFERENCES:

1. C. Julier et al., in preparation
2. G.M. Lathrop et al., Am. J. Hum. Genet. 37:482-498 (1985)

*Present address: CEPH, 27 rue Juliette Dodu, 75010 Paris, France