MspI/HpaII polymorphism in the human multidrug resistance gene 1Daniel A.Haber^{1,2} and David E.Housman¹

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SOURCE/DESCRIPTION: A 2.1kb partial cDNA clone encoding the human multidrug resistance gene 1 (mdr 1) was isolated from drug-resistant cells by A. van der Blik and co-workers (1). The probe used is a 850bp Bgl II-Hind III fragment (nucleotides 1600-2450).

POLYMORPHISM: Msp I/HpaII digestion identifies a three allele polymorphism with bands of 21kb (a), 17kb (b) (see Figure A), and 1.5kb (c) (see Figure B). In addition, an invariant band at 4kb is noted.

FREQUENCY: In 70 unrelated individuals (60 individuals from the CEPH data base), allele frequency is: a. 0.92
b. 0.07
c. 0.01

NOT POLYMORPHIC FOR: Eco RI, Hind III, Bam HI, Bgl II, Kpn I, Pst I, Xba I, Sac I.

CHROMOSOMAL LOCALISATION: The mdr 1 gene has been mapped to human chromosome 7 (2). Band localisation has been reported as either 7q21 (3) or 7q36 (4).

MENDELIAN INHERITANCE: Co-dominant segregation documented in one informative family.

PROBE AVAILABILITY: Human mdr 1 probe was obtained from P. Borst, Netherlands Cancer Institute.

REFERENCES: 1. Van der Blik et al (1988) Cancer Res 48:5927-5932
2. Fojo et al (1986) Somat Cell Mol Genet 12:415-420
3. Callen et al (1987) Hum Genet 77:142
4. Trent et al (1985) Cytogen Cell Genet 40:761-762

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