A PvuII RFLP for the human liver arginase (ARG1) gene

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SOURCE/DESCRIPTION: Liver Arginase (ARG1), a 1550 bp cDNA clone--C1 6B--was isolated from a human liver-derived cDNA library. The vector is pKT218 (Michelson et al., 1983).

POLYMORPHISM: PvuII (CAG/CTG) (New England Biolabs) identifies three strong invariant bands at 6.0, 3.0, and 2.5 kb, and a simple two-allele polymorphism with either a band at 2.8 or bands at 1.5 and 1.3 kb. Minor bands at 2.1, 2.2, and 2.3 kb also appear to vary among individuals but hybridize weakly and have not been characterized.

FREQUENCY: Studied 91 unrelated Caucasians:
2.8 kb allele A1: .14 ± .04
1.5 and 1.3 kb allele A2: .86 ± .04

NOT POLYMORPHIC FOR: BamHI, BglII, EcoRI, EcoRV, HincII, HindIII, KpnI, MspI, PstI, RsaI, SacI, TaqI when tested on a panel of 13 unrelated individuals.

CHROMOSOMAL LOCALIZATION: Human chromosome band 6q23 by somatic cell hybrid panels and in situ hybridization (Sparkes et al., 1986).

MENDELIAN INHERITANCE: Segregates as co-dominant in three large families with a total of 201 individuals.

PROBE AVAILABILITY: Write to Stephen D. Cederbaum.

OTHER COMMENTS: Hybridized under normal stringency conditions.

REFERENCES: Sparkes, R.S. et al., 1975. American Journal of Human Genetics, in press.
Michelson, A.M. et al., 1983. Proceedings of the National Academy of Science USA 80:472-476.

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