MSP RFLP for X-linked proteolipid protein gene (PLP) identified with either rat or human *PLP* cDNA clone

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SOURCE AND DESCRIPTION: P27, a full length 3.2 kb cDNA fragment of the rat brain proteolipid protein (PLP) inserted into the KpnI site of the vector pUC18 (Milner et al., 1985). pRL1, human cDNA, inserted into the EcoRI site of the vector pUC9.

POLYMORPHISM: Using either the rat or human clone, MspI (C/CGG) (New England Biolabs) identifies one invariant band at 1.8 kb and a simple two-allele polymorphism with a band at either 4.5 kb or 4.0 kb.

FREQUENCY: Studied 75 chromosomes in 46 mixed European Caucasians: 29 females, 17 males.

4.5 kb allele (A1)	0.08 ± 0.03
4.0 kb allele (A2)	0.92 ± 0.03

NOT POLYMORPHIC FOR: BamHI, EcoRI, EcoRV, HincII, HindIII, PstI, RsaI, SacI and XmnI, using a panel of 10-12 unrelated Caucasians.

CHROMOSOMAL LOCALIZATION: Xq21.2-Xq22 using a panel of translocation hybrids and a bovine or human PLP cDNA (Willard and Riordan, 1985; Willard et al., unpub.).

MENDELIAN INHERITANCE: X-linked segregation pattern has been observed in two large families with a total of 62 individuals.

PROBE AVAILABILITY: Available for collaboration: for rat cDNA contact R.J. Milner at La Jolla, CA 92037; for human cDNA contact J.R. Riordan or H.F. Willard at Toronto (addresses above).

OTHER COMMENTS: Three other enzymes, BamHI, EcoRI, and PstI appear to show variant bands, the natures of which are not yet fully characterized.

REFERENCE: Milner et al., *Cell* 42:931, 1985
Willard and Riordan, *Science* 230: 940, 1985.

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