SacI and XbaI polymorphisms detected by lipocortin 2A (LPC2A)

N.J.Leysens, N.G.Newkirk and J.C.Murray

Department of Pediatrics, University of Iowa Hospitals and Clinics, Iowa City, IA 52242, USA

SOURCE/DESCRIPTION: An 800 bp EcoRI fragment of the lipocortin II cDNA cloned into pUC 18(1).

POLYMORPHISM:
SacI detects a 2 allele polymorphism with bands at 4.6 and 4.1 kb.
XbaI detects a 2 allele polymorphism with bands at 26 and 21 kb.

FREQUENCY:

SacI: Estimated from 70 parents	XbaI: Estimated from 70 parents
4.6 kb: 0.06	26 kb: 0.73
4.1 kb: 0.94	21 kb: 0.27

NOT POLYMORPHIC FOR: BamHI, BclI, BglI, BglII, EcoRI, EcoRV, HaeIII, HincII, HindIII, KpnI, PstI, SspI, StuI, StyI, TaqI

CHROMOSOMAL LOCALISATION: Lipocortin IIA (LPC2A) by somatic cell hybridization analysis and in situ hybridization maps to 4q21-q31(2). The SacI RFLP is linked to MNS confirming its chromosome 4 location. The XbaI RFLP is unlinked to the SacI RFLP and unlinked to any other chromosome 4 markers tested. It may represent an RFLP for a sequence cross hybridizing with LPC2A.

MENDELIAN INHERITANCE: SacI: Co-dominant inheritance has been observed in 9 three generation CEPH families consisting of 113 individuals. XbaI: Co-dominant inheritance has been observed in 24 three generation CEPH families consisting of 240 individuals.

PROBE AVAILABILITY: The probe is available from Barbara Wallner at BIOGEN, 14 Cambridge Center, Cambridge, MA 02142.

OTHER COMMENTS: RFLPs were observed under normal conditions of hybridization and washing. As noted above, the XbaI RFLP appears to not be on chromosome 4.

REFERENCE:

1 Kuo-Sen Huang et al (1986) Cell 46:191-199

2 Huebner, K. et al. (1987). "Chromosome localization of the human genes for lipocortin I and lipocortin II family". Cytogenet Cell Genet 46:631

ACKNOWLEDGEMENTS JCM was supported by NIH grants HD20998 and GM40864. Barbara Wallner generously provided the LPC2A probe.