
RFLP for an EGF-receptor related gene associated with the melanoma oncogene locus of *Xiphophorus maculatus*

D. Adám, J. Wittbrodt, A. Telling and M. Scharl

Gene Center/Max-Planck-Institute for Biochemistry, D-8033 Martinsried, FRG

SOURCE AND DESCRIPTION OF PROBE: pXX21, an 850 bp Eco R I/Sac I fragment subcloned in pUC18 derived from a sub-genomic library of Eco R I digested DNA from male *Xiphophorus maculatus* ($X^{Dr Tu-Sd} Y^{Ar Tu-Sr}$; origin Rio Jamapa, Mexico); isolated due to cross hybridization to the *v-erb B* gene.

POLYMORPHISM: Eco RI identifies two alleles with bands at 5.0 kb (A1) and 6.5 kb (A2).

FREQUENCY: Inbred strains with X-chromosomal melanoma oncogene loci (*Tu-Sd*, *Tu-Sp*) and Y-chromosomal melanoma oncogene loci (*Tu-Sr*, *Tu-Ni*, *Tu-Ni^e*), A1: 0.75, A2: 0.25.

NOT POLYMORPHIC FOR: Bam HI, Sac I.

CHROMOSOMAL LOCATION: Localized on melanoma oncogene bearing sex chromosomes (Scharl, 1988), A1: X-chromosomal, A2: Y-chromosomal.

MENDELIAN INHERITANCE: Allelic segregation in hybrid lines (*maculatus* x *helleri*; *maculatus* W/Z x *maculatus* X/Y).

PROBE AVAILABILITY: Available for collaborative studies.

OTHER COMMENTS: In Eco R I digested DNA an invariant band at 7.0 kb was also detected with this probe.

REFERENCE: Scharl, M. (1988), Genetics, in press.

ACKNOWLEDGEMENTS: This work was supported by the Bundesministerium für Forschung und Technologie, Schwerpunkt "Grundlagen und Anwendungen der Gentechnologie" and by the Deutsche Forschungsgemeinschaft, Schwerpunkt "Klassische und Molekulare Tumorzitogenetik".

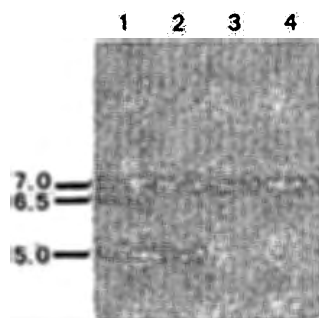


Fig. 1: Southern hybridization with the pXX21 probe. Eco RI digests of (1) male *Xiphophorus maculatus* ($X^{Dr Tu-Sd} Y^{Ar Tu-Sr}$) (2) female *Xiphophorus maculatus* ($X^{Dr Tu-Sd} X^{Dr Tu-Sd}$) (3) *Xiphophorus maculatus* (origin Rio Catazaja, Mexico) (4) *Xiphophorus helleri* (origin Rio Lancetilla, Belize); 3 and 4 without melanoma oncogene bearing sex chromosomes.