

*Xiphophorus maculatus*, JpY<sup>IrBr</sup>



Male

Strain code: JpYIrBr

Phenotypes scored: Pigment patterns: Eye color, iris red (Ir); body color, body-red (Br); spotted dorsal (Sd), dorsal red (Dr), shoulder spot (ss) and dot (D).

Introduction:

This stock has been maintained as a stock separate from the other *X. maculatus* since a crossover event occurred in the Belize platyfish. The crossover resulted in the linkage of the genes for iris red (Ir) and body red (Br) on the Y chromosome, and consequently, males of this stock show both patterns. In addition, the ventral margin of the caudal fin is often black in males. This stock also exhibits dot (D), shoulder spot (ss), spotted dorsal (Sd) and dorsal red (Dr), all characters derived from *X. maculatus* Jp163A.

The X-chromosome of this stock carries the early maturing P-1 factor. Preliminary data also indicates that after the Br gene crossed over, the late maturing P-4 factor remains linked.

Sex determination / sexing:

The chromosomal sex determination in JpYIrBr is XX / XY. The fish are sexed at two to three months of age and males mature quite late at about six or seven months of age.

Scoring:

Fish in this stock are scored for the traits Sd, Dr, Ir, Br, D, and ss. Since the genes for IrBr are Y-linked, females do not inherit these traits and are scored and subsequently discarded. Expression of Sd and ss may vary in males. An occasional female expressing IrBr has been noted and it is possible that these are XY females. These females are also scored and discarded.

Maintenance:

This stock is maintained by breeding JpYIrBr males with the genotype  $X^{SdDr} Y^{IrBr} ss D$  to Jp163A females. The Jp163A females have the genotype  $X^{SdDr} X^{SdDr} ss D$ . The mating scheme for maintaining this stock is:

$$\begin{array}{ccc} X^{SdDr} X^{SdDr} ss D & (x) & X^{SdDr} Y^{IrBr} ss D \\ \text{Jp163A} & & \text{JpYIrBr} \end{array}$$

At least 2 matings are set up each generation to ensure production of one new pedigree in that generation. All male progeny should possess  $X^{SdDr}$  and  $Y^{IrBr}$  and be used in matings to produce the successive generation.

Stock source:

Prof. Klaus Kallman, the New York Aquarium, 5/12/93.