



These SR/SR females are then crossed back to:

- A) Y/ST target isolate males, producing more target male bearing SR males (cross A)
- B) The sons of these males (cross B)

Figure S1. Diagram outlining the introgression scheme used to introgress SR into each target isoline.

Target isoline autosomal DNA is indicated by upper case letters, while the SR stock autosomal DNA is lower case. Green letters are derived from the father, and blue from the mother.

In the two stage introgression, Cross A is designed to produce Y/SR hybrid males, half of whose autosomal DNA comes from the target isoline. These hybrid males are then crossed to SR/SR stock females, producing SR/SR females, a quarter of whose autosomal DNA originates from the target isoline.

These SR/SR hybrid females are then crossed back into the target isoline, to produce Y/SR males whose autosomal DNA is 62.5% derived from the target isoline. These sons are also crossed into SR/SR hybrid females, continuing the slow replacement of the SR stock's autosomes with autosomes from the target isoline.

Four subpopulations of the SR stock were created, so each would have autosomes from a different isoline introgressed into it.