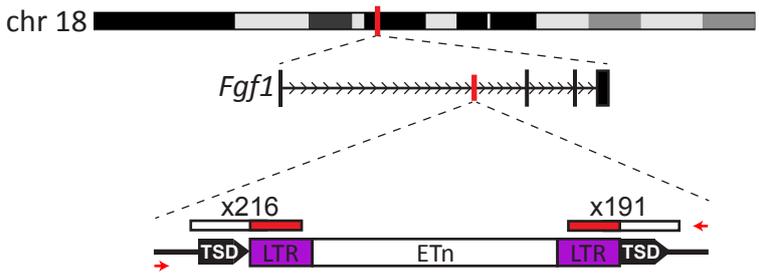
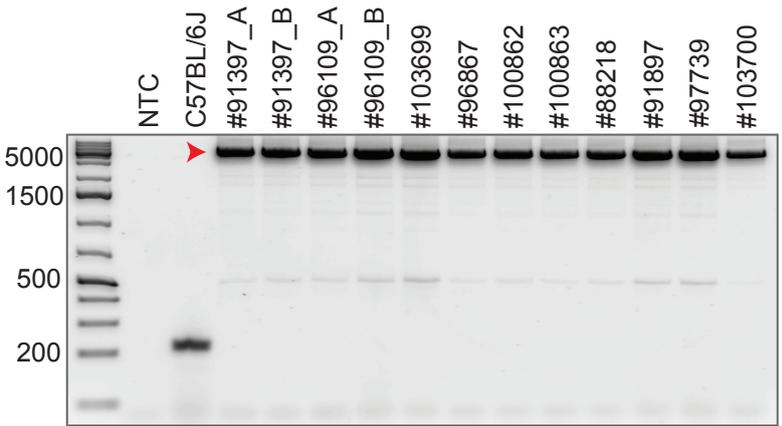


# Supplemental Figure S1

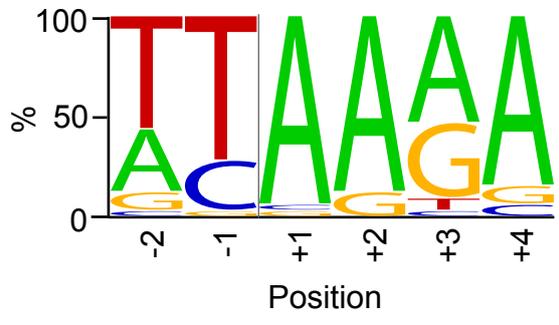
**A**



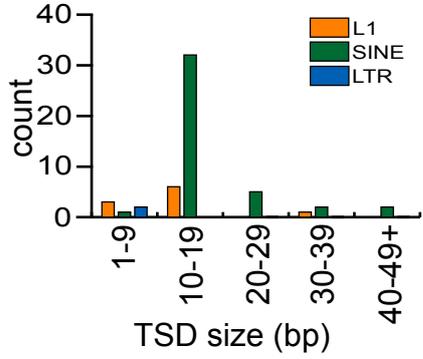
Empty-Filled PCR validation



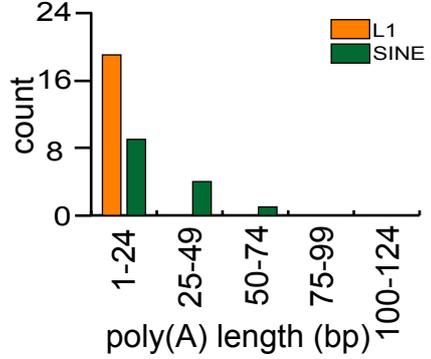
**B**



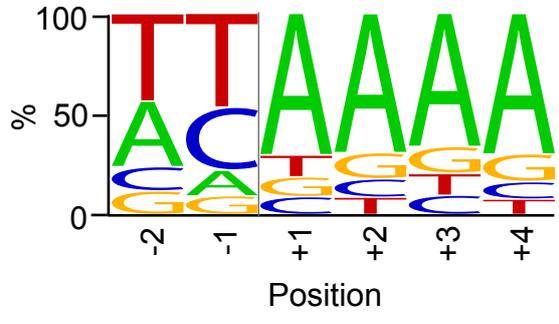
**C**



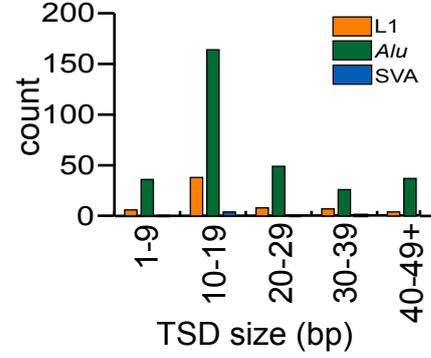
**D**



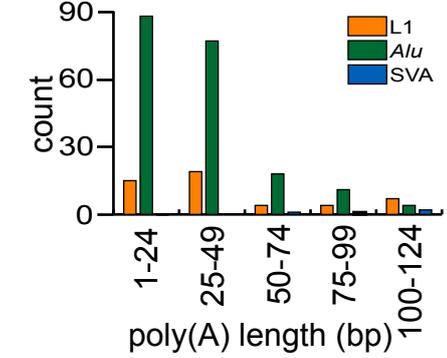
**E**



**F**



**G**



**Supplemental Figure S1. Characteristics of polymorphic non-reference retrotransposon insertions identified in this study.**

(A) A polymorphic ETn element inserted in sense to the *Fgf1* gene and found in *Mdr2*<sup>-/-</sup> mice (traced to the FVB parental strain). Target-site duplications (TSDs) are shown as black arrows. LTRs flanking the ETn internal sequence are colored purple. The location and count of junction-spanning mRC-seq and WGS reads supporting the insertion are depicted as red and white rectangles. The positions of empty-filled PCR validation primers are shown as small red arrows. An agarose gel containing the empty/filled validation products is shown at right. Templates are indicated above the gel image and comprise DNA extracted from nodules for each of the *Mdr2*<sup>-/-</sup> animals, or extracted from C57BL/6J tail DNA as a control. A red arrow indicates the validating filled site band for each of the *Mdr2*<sup>-/-</sup> animals. Absence of the empty site in these animals, which was found in the C57BL/6J DNA, indicates that the ETn insertion was homozygous and fixed in our *Mdr2*<sup>-/-</sup> colony.

(B-D) L1 endonuclease cleavage motif (B), TSD size distribution (C) and poly(A) tract length distribution (D) for mouse polymorphic insertions.

(E-G) L1 endonuclease cleavage motif (E), TSD size distribution (F) and poly(A) tract length distribution (G) for human polymorphic insertions. Plots in (B) and (E) were generating using WebLogo (Crooks et al. 2004).