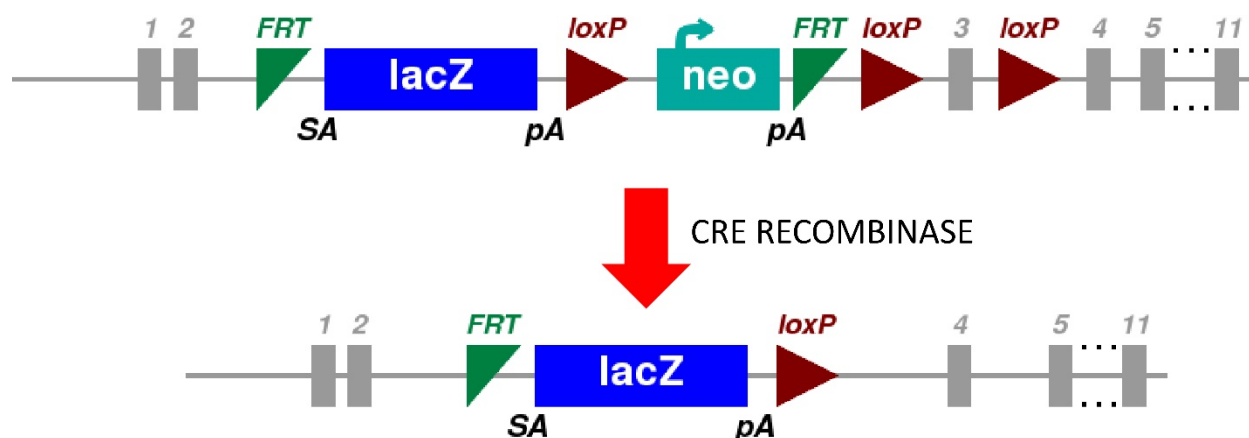


### Rad21l mutation – JAX allele



**Figure S1:** *Rad21l* mutant allele used in this study. The *Rad21l*<sup>JAX</sup> allele C57BL/6N-derived JM8.N4 embryonic stem (ES) cells that were targeted with a  $\beta$ -galactosidase containing cassette that generated a knockout first reporter allele for *Rad21l* that harbored a floxed exon 3 were sourced from the International Knockout Mouse Consortium (Skarnes *et al.* 2011), <http://www.knockoutmouse.org/martsearch/project/22907>). As part of the KOMP2 program (<http://commonfund.nih.gov/KOMP2/>), these ES cells were injected into B6(Cg)-Tyrc-2J/J blastocysts. The resulting chimeric males were bred to C57BL/6NJ females and then to B6N.Cg-Tg(Sox2-cre)1Amc/J mice to excise the floxed neomycin cassette and exon 3, resulting in the heterozygote B6N(Cg)-Rad21l<sup>tm1b(KOMP)</sup>Wtsi/2J strain used in this study. The *Stag3* and *Rec8* mutant alleles used in this study have been previously described (Bannister *et al.* 2004; Hopkins *et al.* 2014).