



Extended Data Figure 5 | Detection of point mutations in mice with the BigBlue reporter system. **a**, Chromosome 4 of the BigBlue reporter mouse harbours a λ -phage transgene that contains the mutational target. The phage DNA can be recovered from mouse tissues, packaged into phage and used to infect bacteria. Phage *cII*⁻ mutants can be detected by the ability of these phage to form plaques at 24°C. **b**, Quantification of the frequency of *cII*⁻ mutant phage recovered from the bone marrow of young *Aldh2*^{-/-} *Fancd2*^{-/-} and control mice carrying the BigBlue transgene.

ENU-treated mice serve as positive controls for the assay (*P* calculated by two-sided Mann–Whitney test; data shown as mean and s.e.m.; *n* = 7, 7, 6, 7 and 6 mice, left to right). **c**, Relative contribution of the indicated mutation classes to the point-mutation spectra of *cII*⁻ mutant phage isolated from the bone marrow. The ENU-mutation spectrum is characterized by T to A transversions and T to C transitions. *n* is the number of sequenced *cII*⁻ mutant phage.