



SUPPLEMENTARY FIG. S4. HDR donors. (A) Puromycin-based donor. The floxed PGK puromycin construct is flanked by a *left* donor arm of 1,126 bp and a *right* homology arm of 1,344 bp. The *left* arm is identical to the *FANCI* locus sequence and the *right* arm contained five engineered sequences for detection of HDR events: four single nucleotide polymorphisms (SNP) that are silent alterations that maintain the proper amino acid (AA) sequence code and a fifth that corrects the 1461 T>A mutation. (B) Exogenous marker sequence free donor. The puromycin-free donor is ~2.4 kb in length and contains homologous sequence and 30 silent polymorphisms to prevent retargeting of modified alleles and as markers for homologous recombination. Within these is the base that corrects the 1461 genotype/phenotype. (C) DNA sequence alignment between wild-type *FANCI* (WT) and the puromycin-free donor (PF) are shown. The corrective base is shown in *green* and other SNPs are shown in *blue*. Below that is the corresponding AA sequence that is maintained across donor variants. bp, base pairs; HDR, homology-directed repair.