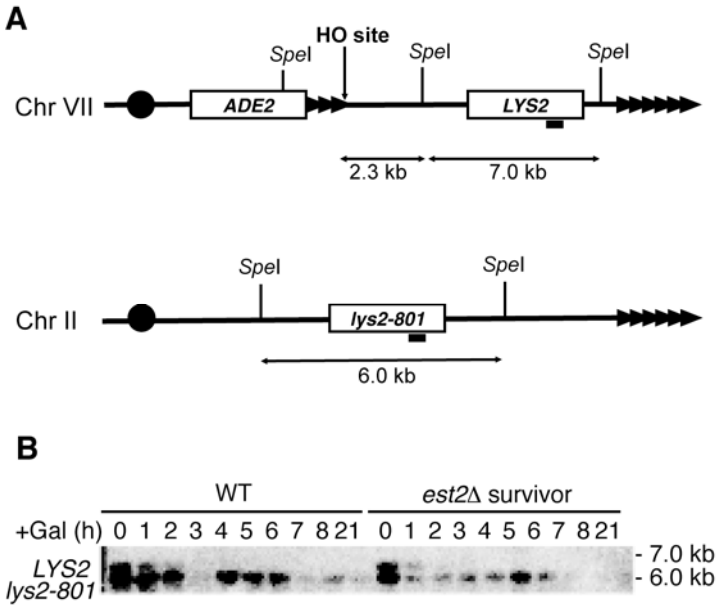

Figure S1 Efficient degradation of the distal, non-seed-containing DSB end in post-senescence survivors. (**A**) Diagram of the assay system similar to Fig. 1A. (**B**) The same blot as shown in Fig. 1B was reprobed with a *LYS2* probe. Note the disappearance of the *LYS2* (chr. VII) signal compared to the *lys2-801* signal (chr. II).

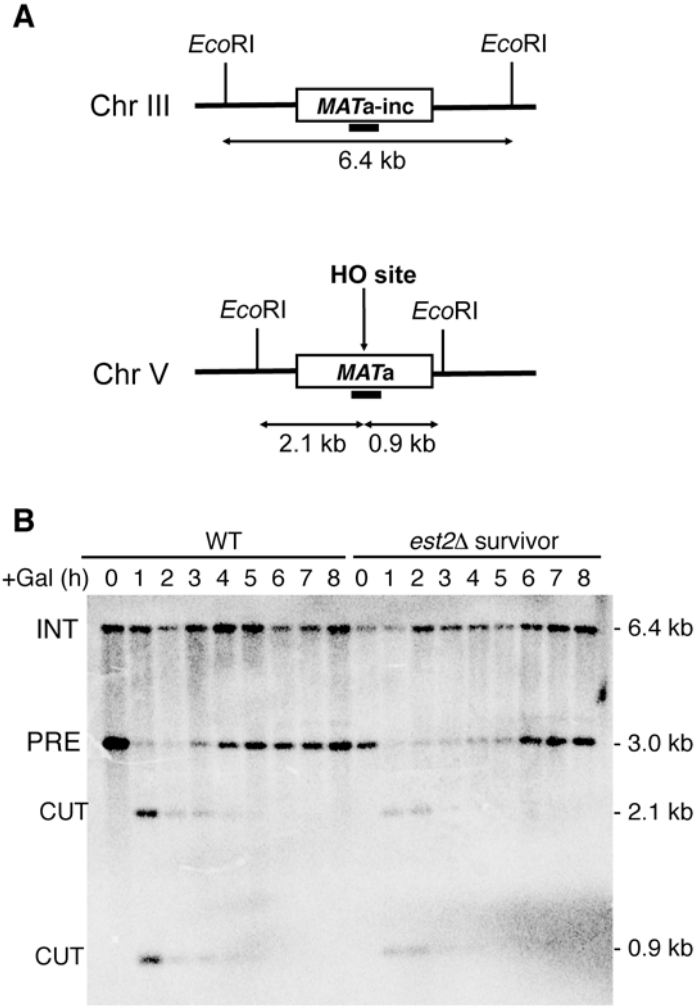

Figure S2 Normal gene conversion at a non-telomere-seed-containing DSB. (**A**) Schematic diagram of the assay system, where an HO break at an ectopic mating type locus on chromosome V is repaired with the endogenous, but HO-resistant, mating type locus repair template on chromosome III. (**B**) Southern blot of the wild type control (WT) and an isogenic *est2Δ* survivor treated with galactose for the indicated times.

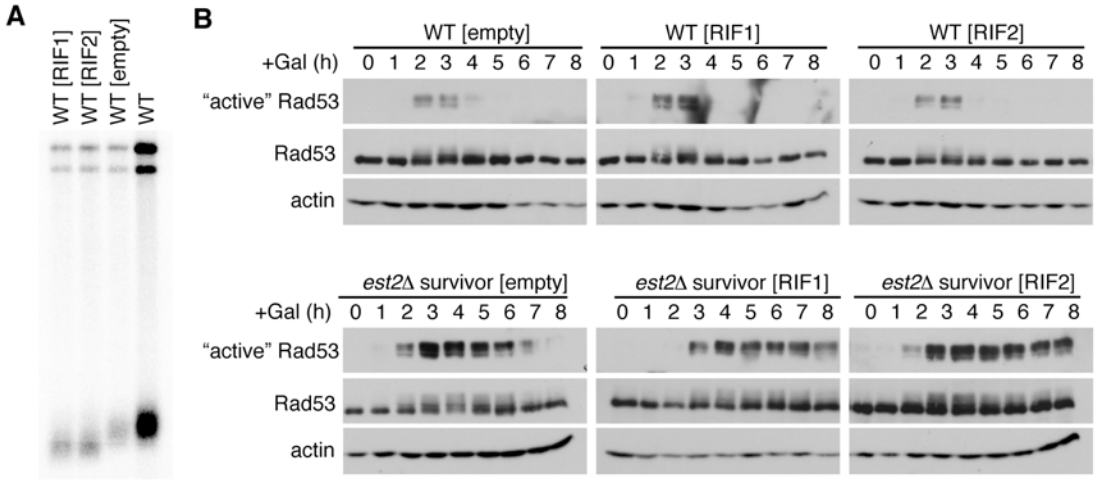

Figure S3 Rif1/2 overexpression does not restore the anti-checkpoint function of telomere seeds in post-senescence survivors. (**A**) *In lieu* of available Rif1/2 antibodies, rapid telomere shortening as a consequence of Rif1/2 overexpression (WOTTON and SHORE 1997) was assessed by Southern blot using a Y'-probe as described (Pike and Heierhorst 2007). (**B**) Western blots as in Fig. 2 of the indicated strains containing the empty-vector control or *RIF1* or *RIF2* overexpression constructs as indicated.

Table S1 Yeast strains used in this study

Strain	Genotype	Reference
Y219	*ade1 leu2-3,112 lys5 trp1::hisG ura3-52 hmlΔ::ADE1 hmrΔ::ADE1 ade3::GAL-HO*	(Lee *et al.* 1998)
Y496	*ade1 leu2-3,112 lys5 trp1::hisG ura3-52 hmlΔ::ADE1 hmrΔ::ADE1 ade3::GAL-HO MATa-inc arg5,6::MATa-HPH*	(Ira *et al.* 2003)
Y585	*MATa-inc ade2-101 lys2-801 his3-Δ200 trp1-Δ63 ura3-52 leu2-Δ1::GAL1-HO-LEU2 VII-L::ADE2-TG(1-3)-HO site-LYS2*	(Diede and Gottschling 2001)
Y1537	Y585 *rad50Δ::NAT*	This study
Y1591	Y585 *est2Δ::KAN* type II survivor	This study
Y1592	Y585 *est2Δ::KAN* type II survivor	This study
Y1596	Y585 *tel1Δ::NAT*	This study
Y1602	Y585 *sml1Δ::HIS3*	This study
Y1615	Y585 *tlc1Δ::NAT* type II survivor	This study
Y1616	Y585 *sml1Δ::HIS3 est2Δ::KAN* type II survivor	This study
Y1621	Y585 *tel1Δ::NAT est2Δ::KAN* type II survivor	This study
Y1629	Y496 *est2Δ::KAN* type II survivor	This study
Y1636	Y585 *rad9Δ::NAT*	This study
Y1637	Y585 *est2Δ::KAN* type II survivor *rad9Δ::NAT*	This study
Y1643	Y585 *sml1Δ::HIS3 est2Δ::KAN* type II survivor *rad53-K227A*	This study

Supporting Literature Cited

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