**Supplementary Table S2** Fission yeast strains used in this study

| Figure | Strain | Full Genotype$^a$ |
|--------|--------|-------------------|
| 1B, S1 | wt     | h’ his3-D1        |
|        | poz1Δ  | YTC8489 h’ ade6-M216 his3-D1 poz1Δ:kanMX6 |
|        | rap1Δ  | YTC9370 h’ his3-D1 rap1Δ::ura4* |
|        | taz1Δ  | YTC9369 h’ ade6-M216 his3-D1 taz1Δ::ura4* |
|        | poz1Δ rap1Δ | YTC9371 h’ his3-D1 poz1Δ::kanMX6 rap1Δ::ura4* |
|        | poz1Δ taz1Δ | YTC9372 h’ ade6-M216 his3-D1 poz1Δ::kanMX6 taz1Δ::ura4* |
|        | rap1Δ taz1Δ | YTC9373 h’ ade6-M210 his3-D1 rap1Δ::ura4* taz1Δ::LEU2 |
|        | poz1Δ rap1Δ taz1Δ | YTC9374 h’ his3-D1 poz1Δ::kanMX6 rap1Δ::ura4* taz1Δ::LEU2 |
| 1C     | rap1* (no tag) | TN2411 h’ his3-D1 |
|        | rap1-myc | YTC9493 h’ ade6-M210 rap1*::myc::kanMX |
|        | rap1-myc poz1Δ | YTC9929 h’ ade6-M210 his3-D1 rap1*::myc::kanMX poz1Δ::kanMX6 |
|        | rap1-myc taz1Δ | YTC9934 h’ ade6-M210 rap1*::myc::kanMX taz1Δ::ura4* |
|        | rap1-myc poz1Δ taz1Δ | YTC10060 h’ ade6-M210 his3-D1 rap1*::myc::kanMX poz1Δ::kanMX6 taz1Δ::ura4* |
| 1D     | trt1* (no tag) | SS5264 h’ his3-D1 cdc25-22 |
|        | trt1-myc | TN7708 h’ his3-D1 trt1*::Gt-13myc::kanMX6 cdc25-22 |
|        | trt1-myc poz1Δ | YTC8558 h’ his3-D1 trt1*::Gt-13myc::kanMX6 poz1Δ::kanMX6 cdc25-22 |
|        | trt1-myc rap1Δ | YTC8969 h’ his3-D1 trt1*::Gt-13myc::kanMX6 rap1Δ::ura4* cdc25-22 |
|        | trt1-myc taz1Δ | TN8601 h’ his3-D1 trt1*::Gt-13myc::kanMX6 taz1Δ::ura4* cdc25-22 |
|        | trt1-myc poz1Δ taz1Δ | YTC9404 h’ his3-D1 trt1*::Gt-13myc::kanMX6 poz1Δ::kanMX6 taz1Δ::ura4* cdc25-22 |
|        | trt1-myc rap1Δ taz1Δ | YTC9411 h’ ade6-M210 his3-D1 trt1*::Gt-13myc::kanMX6 rap1Δ::ura4* taz1Δ::LEU2 cdc25-22 |
|        | trt1-myc poz1Δ rap1Δ taz1Δ | YTC9453 h’ his3-D1 trt1*::Gt-13myc::kanMX6 poz1Δ::kanMX6 rap1Δ::ura4* cdc25-22 |
|        | trt1-myc poz1Δ rap1Δ taz1Δ | YTC9452 h’ his3-D1 trt1*::Gt-13myc::kanMX6 poz1Δ::kanMX6 rap1Δ::ura4* taz1Δ::LEU2 cdc25-22 |
| 2, 3C, 5, | trt1-myc | TN7708 h’ his3-D1 trt1*::Gt-13myc::kanMX6 cdc25-22 |
| 7C, S2, S3, | trt1-myc poz1Δ | YTC8558 h’ his3-D1 trt1*::Gt-13myc::kanMX6 poz1Δ::kanMX6 cdc25-22 |
| S5, S6, | trt1-myc rap1Δ | YTC8969 h’ his3-D1 trt1*::Gt-13myc::kanMX6 rap1Δ::ura4* cdc25-22 |
| S17, S18 | trt1-myc taz1Δ | TN8601 h’ his3-D1 trt1*::Gt-13myc::kanMX6 taz1Δ::ura4* cdc25-22 |
|        | pol1-FLAG | TN4781 h’ his3-D1 pol1*::5FLAG::kanMX cdc25-22 |
|        | pol1-FLAG poz1Δ | YTC8705 h’ his3-D1 pol1*::5FLAG::kanMX poz1Δ::ura4* cdc25-22 |
|        | pol1-FLAG rap1Δ | YTC9589 h’ his3-D1 pol1*::5FLAG::kanMX rap1Δ::ura4* cdc25-22 |
|        | pol1-FLAG taz1Δ | YTC9375 h’ his3-D1 pol1*::5FLAG::kanMX taz1Δ::ura4* cdc25-22 |
|        | pol2-FLAG | TN4782 h’ ade6-M210 his3-D1 pol2*::5FLAG::kanMX cdc25-22 |
|        | pol2-FLAG poz1Δ | YTC8693 h’ ade6-M210 his3-D1 pol2*::5FLAG::kanMX poz1Δ::ura4* cdc25-22 |
|        | pol2-FLAG rap1Δ | YTC9423 h’ ade6-M210 his3-D1 pol2*::5FLAG::kanMX rap1Δ::ura4* cdc25-22 |
|        | pol2-FLAG taz1Δ | YTC9280 h’ ade6-M210 his3-D1 pol2*::5FLAG::kanMX taz1Δ::ura4* cdc25-22 |
| wt (no tag) | SS5264 h’ his3-D1 cdc25-22 |
| poz1Δ (no tag) | YTC8929 h’ his3-D1 poz1Δ::kanMX cdc25-22 |
| rap1Δ (no tag) | YTC8938 h’ his3-D1 rap1Δ::ura4* cdc25-22 |
| taz1Δ (no tag) | YTC8933 h’ his3-D1 taz1Δ::ura4* cdc25-22 |
| 3, S11 | myc-rad26 | TN7840 h’ his3-D1 9myc-rad26*::hphMX6 cdc25-22 |
|        | myc-rad26 poz1Δ | YTC10349 h’ his3-D1 9myc-rad26*::hphMX6 poz1Δ::kanMX6 cdc25-22 |
|        | myc-rad26 rap1Δ | YTC10338 h’ his3-D1 9myc-rad26*::hphMX6 rap1Δ::ura4* cdc25-22 |
|        | myc-rad26 taz1Δ | YTC10420 h’ his3-D1 9myc-rad26*::hphMX6 taz1Δ::ura4* cdc25-22 |
|        | rad11-FLAG | BAM5875 h’ his3-D1 rad11*::5FLAG::kanMX cdc25-22 |
|        | rad11-FLAG poz1Δ | YTC10334 h’ his3-D1 rad11*::5FLAG::kanMX poz1Δ::kanMX6 cdc25-22 |
|        | rad11-FLAG rap1Δ | YTC10341 h’ his3-D1 rad11*::5FLAG::kanMX rap1Δ::ura4* cdc25-22 |
|        | rad11-FLAG taz1Δ | YTC10319 h’ his3-D1 rad11*::5FLAG::kanMX taz1Δ::ura4* cdc25-22 |
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| ccq1-FLAG | TN6874 | h' his3-D1 ccq1-5FLAG::kanMX6 cdc25-22 |
| ccq1-FLAG rap1Δ | YTC10947 | h' ccq1-5FLAG::kanMX6 rap1Δ::ura4+ cdc25-22 |
| ccq1-FLAG taz1Δ | YTC10950 | h' his3-D1 ccq1-5FLAG::kanMX6 taz1Δ::ura4+ cdc25-22 |

4B, 5, S12-S15, S17, S18

| ccq1-FLAG rap1Δ | TN7456 | h' his3-D1 ccq1-13myc::kanMX6 cdc25-22 |
| ccq1-FLAG poz1Δ | YTC8709 | h' his3-D1 ccq1-13myc::kanMX6 poz1Δ::natMX6 cdc25-22 |
| ccq1-FLAG poz1Δ YTC10947 | h' his3-D1 ccq1-13myc::kanMX6 poz1Δ::natMX6 cdc25-22 |
| ccq1-FLAG rap1Δ | YTC9307 | h' his3-D1 ccq1-13myc::kanMX6 rap1Δ::ura4+ cdc25-22 |
| ccq1-FLAG taz1Δ | YTC9327 | h' his3-D1 ccq1-13myc::kanMX6 taz1Δ::ura4+ cdc25-22 |
| ccq1-myc | TN7467 | h' his3-D1 tpz1-13myc::kanMX6 cdc25-22 |
| ccq1-myc poz1Δ | YTC9314 | h' his3-D1 ccq1-13myc::kanMX6 poz1Δ::natMX6 cdc25-22 |
| ccq1-myc rap1Δ | YTC9325 | h' his3-D1 ccq1-13myc::kanMX6 rap1Δ::ura4+ cdc25-22 |
| ccq1-myc taz1Δ | YTC9414 | h' his3-D1 ccq1-13myc::kanMX6 taz1Δ::ura4+ cdc25-22 |

6A

| rad26+ (no tag) | TN2411 | h' his3-D1 |
| myc-rad26 | LS7680 | h' his3-D1 myc-rad26+::hphMX6 |
| myc-rad26 trt1 | YTC12785 | h' ade6-M216 his3-D1 9myc-rad26+::hphMX6 trt1Δ::his3+ |

6B-C, 7C, S19

| trt1+ (no tag) | SS5264 | h' his3-D1 cdc25-22 |
| trt1-myc | TN7708 | h' his3-D1 trt1-13myc::kanMX6 cdc25-22 |
| trt1-myc pois1Δ | YTC8969 | h' his3-D1 trt1-13myc::kanMX6 pois1Δ::natMX6 cdc25-22 |
| trt1-D743A-myc | YTC12787 | h' ade6-M210 his3-D1 trt1-D743A-G8-13myc::kanMX6 cdc25-22 |
| trt1-D743A-myc pois1Δ | YTC12788 | h' ade6-M210 his3-D1 trt1-D743A-G8-13myc::kanMX6 cdc25-22 |

7, S20

| pol1-FLAG trt1+ | TN4781 | h' his3-D1 pol1-5FLAG::kanMX cdc25-22 |
| pol1-FLAG trt1Δ | TN8388b | h' ade6-M210 his3-D1 pol1-5FLAG::kanMX trt1Δ::his3+ cdc25-22 |
| pol1-FLAG trt1-D743A | YTC10066b | h' ade6-M210 his3-D1 pol1-5FLAG::kanMX trt1-D743A::LEU2 cdc25-22 |
| pol2-FLAG trt1+ | TN4782 | h' ade6-M210 his3-D1 pol2-5FLAG::kanMX cdc25-22 |
| pol2-FLAG trt1Δ | TN8393b | h' ade6-M210 his3-D1 pol2-5FLAG::kanMX trt1Δ::his3+ cdc25-22 |
| pol2-FLAG trt1-D743A | YTC10064b | h' ade6-M210 his3-D1 pol2-5FLAG::kanMX trt1-D743A::LEU2 cdc25-22 |

8, S21

| pol1-FLAG | TN4781 | h' his3-D1 pol1-5FLAG::kanMX cdc25-22 |
| pol1-FLAG pois1Δ | YTC9589 | h' his3-D1 pois1-5FLAG::kanMX pois1Δ::ura4+ cdc25-22 |
| pol1-FLAG pois1Δ pois1 Δ | YTC9588 | h' ade6-M210 his3-D1 pois1-5FLAG::kanMX pois1Δ::his3+ pois1Δ::ura4+ cdc25-22 |
| pol2-FLAG pois1Δ | YTC7822 | h' ade6-M210 his3-D1 pois2-5FLAG::kanMX cdc25-22 |
| pol2-FLAG pois1Δ pois1Δ | YTC7823 | h' ade6-M210 his3-D1 pois2-5FLAG::kanMX pois1Δ::ura4+ cdc25-22 |
| stn1-myc | TN6886 | h' his3-D1 stn1-13myc::kanMX6 cdc25-22 |
| stn1-myc pois1Δ | YTC9299 | h' his3-D1 stn1-13myc::kanMX6 pois1Δ::ura4+ cdc25-22 |
| stn1-myc pois1Δ pois1Δ | YTC13543b | h' ade6-M210 his3-D1 stn1-13myc::kanMX6 pois1Δ::ura4+ pois1Δ::his3+ cdc25-22 |

wt (no tag) | SS5264 | h' his3-D1 cdc25-22 |
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myc-tel1 rap1Δ  YTC10938  h’ his3-D1 9myc-tel1+ rap1Δ::ura4*
rad3-kdΔ (no tag)  TN1678  h’ ade6-M216 his3-D1 rad3-kdΔ::kanMX4
myc-tel1 rad3-kdΔ  YTC12932  h’ ade6-704 his3-D1 9myc-tel1+ rad3-kdΔ::kanMX4
rad3-kdΔ rap1Δ (no tag)  YTC13045  h’ ade6+ his3-D1 rad3-kdΔ::kanMX4 rap1Δ::ura4*
myc-tel1 rad3-kdΔ rap1Δ  YTC12931  h’ ade6-704 his3-D1 9myc-tel1+ rad3-kdΔ::kanMX4 rap1Δ::ura4*

*All strains are leu1-32 ura4-D18, except for strains expressing hENT1, which are leu1-32::[hENT1 leu1+] ura4-D18.

bEarly generation strains that have just lost trt1+ plasmid (pNR210-trt1+) were used to ensure that ChIP assays monitored trt1Δ or trt1-D743A cells carrying longest telomeres as possible.