

RAW DATA FOR THE ESTIMATION OF WGDs

| | | n° of colonies observed | | WGDs at day 3 (n=10) | day3/day5 (%) | WGD % | |
|--------------|------------------|-------------------------|-------|----------------------|---------------|-------|-----|
| | | day 3 | day 5 | | | | |
| experiment 1 | wild type | vector | 267 | 534 | 0/10 | 50,0 | 0,0 |
| | | CEN Δ NEG | 147 | 252 | 0/10 | 58,3 | 0,0 |
| rad53k227A | vector | 715 | 856 | 0/10 | 83,5 | 0,0 | |
| | CEN Δ NEG | 29 | 991 | 9/10 | 2,9 | 2,6 | |

| | | n° of colonies observed | | WGDs at day 3 (n=10) | day3/day5 (%) | WGD % | |
|---------------|------------------|-------------------------|-------|----------------------|---------------|-------|-----|
| | | day 3 | day 5 | | | | |
| experiment 2 | wild type | vector | 350 | 560 | 0/10 | 62,5 | 0,0 |
| | | CEN Δ NEG | 460 | 712 | 0/10 | 64,6 | 0,0 |
| rad53k227A | vector | 243 | 657 | 0/10 | 37,0 | 0,0 | |
| | CEN Δ NEG | 27 | 1145 | 10/10 | 2,4 | 2,4 | |
| tom1 Δ | vector | 780 | 945 | 0/10 | 82,5 | 0,0 | |
| | CEN Δ NEG | 46 | 1134 | 10/10 | 4,1 | 4,1 | |

| | | day 3 | | day 5 | | WGDs at day 3 (n=10) | day3/day5 (%) | WGD % |
|--------------|-----------|----------------------|----------------------|--------|----------------------|----------------------|---------------|-------|
| | | vector | 2 μ Δ NEG | vector | 2 μ Δ NEG | | | |
| experiment 1 | wild type | vector | 340 | 783 | 0/10 | 43,4 | 0,0 | |
| | | 2 μ Δ NEG | 12 | 651 | 7/10 | 1,8 | 1,3 | |

| | | day 3 | | day 5 | | WGDs at day 3 (n=10) | day3/day5 (%) | WGD % |
|--------------|-----------|----------------------|----------------------|--------|----------------------|----------------------|---------------|-------|
| | | vector | 2 μ Δ NEG | vector | 2 μ Δ NEG | | | |
| experiment 2 | wild type | vector | 340 | 632 | 0/10 | 53,8 | 0,0 | |
| | | 2 μ Δ NEG | 8 | 590 | 7/8 | 1,4 | 1,2 | |

Source data Figure 1b. Raw data used to estimate the frequency of WGDs in rad53K227A and tom1 Δ mutants after transformation with the centromeric version of the HTA1-HTB1 Δ NEG vector or the frequency of wild type cells transformed with the 2 μ Δ NEG vector. Methods used to estimate frequency can be found in the Material and Methods section.

| | | HTB1/TUB1 relative mRNA level | | | | |
|----------------------|----------------------|-------------------------------|----------|---------|------|---------------|
| | | BIOLOGICAL REPLICATE | RAW DATA | AVERAGE | SD | paired t-test |
| wild type | vector | 1 | 1,00 | 0,94 | 0,07 | 0,02927212 |
| | | 2 | 0,94 | | | |
| | | 3 | 0,87 | | | |
| 2 μ Δ NEG | 2 μ Δ NEG | 1 | 1,41 | 1,63 | 0,24 | |
| | | 2 | 1,60 | | | |
| | | 3 | 1,87 | | | |

Source data Figure 1e. Q-PCR relative levels obtained for HTB1 mRNA in asynchronous haploid wild type cells transformed with an empty vector or the 2 μ Δ NEG vector.

| | | duplication time (min) | | Average | SD | SEM |
|------------|-----------------------|------------------------|-------------|---------|----|-----|
| | | replicate 1 | replicate 2 | | | |
| wild type | vector | 123 | 132 | 128 | 6 | 4 |
| | CEN Δ NEG | 158 | 170 | 164 | 8 | 6 |
| rad53K227A | vector | 130 | 133 | 131 | 2 | 2 |
| | CEN Δ NEG (n) | 225 | 202 | 213 | 16 | 11 |
| | CEN Δ NEG (2n) | 146 | 152 | 149 | 4 | 3 |

Source data Figure-Figure Supplement 1c: Duplication time (minutes) obtained in each of the two twelve hour kinetics performed for each strain and each vector. 2n indicates strains that were completely diploid at the beginning and the end of the kinetic.

| | | duplication time (min) | | | | | |
|--------------|----------------------|------------------------|-----|-----|-----|---------|----|
| | | EXPERIMENT | 1 | 2 | 3 | AVERAGE | SD |
| haploid (n) | vector | 118 | 119 | 127 | 121 | 5 | 3 |
| | 2 μ Δ NEG | 275 | 246 | 228 | 250 | 24 | 14 |
| diploid (2n) | vector | 105 | 107 | 113 | 108 | 4 | 2 |
| | 2 μ Δ NEG | 180 | 195 | 160 | 178 | 18 | 10 |

Source data Figure-Figure Supplement 1f: Duplication time (minutes) obtained in each of the three twelve hour kinetics performed for each strain and each vector.