

## SUPPLEMENTAL TABLES

Table S1

Strains	Origin	JCF Number
<i>ade6-M210 dcr1::hygMX6</i>	This study	JCF 10501
<i>ade6-M210 ago1::kanMX6</i>	This study	JCF 10503
<i>circular trt1::his3 leu1-32 his3-D1 ura4-D18 ade6-M210 pot1::hygMX6</i>	This study	JCF 10509
<i>trt1+/trt1::his dcr1+/-::hygMX6</i>	This study	JCF 10513
<i>trt1+/trt1::natMX6</i>	This study	JCF 10516
<i>trt1+/trt1::natMRX6 dcr1+/-::hygMX6</i>	This study	JCF 10518
<i>trt1+/trt1::natMRX6 ago1+/-::kanMX6</i>	This study	JCF 10520
<i>circular trt1::his3 leu1-32 his3-D1 ura4-D18 ade6-M210 dcr1::hygMX6</i>	This study	JCF 10521
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 dcr1::hygMX6</i>	This study	JCF 10522
<i>trt1::his3 ura4+ dcr1::hygMX6</i>	This study	JCF 10524
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 ago1::hygMX6</i>	This study	JCF JCF 10525
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 rdp1::hygMX6</i>	This study	JCF 10527
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 rdp1::hygMX6</i>	This study	JCF 10528
<i>ade6-M210 his3-D1 leu1-32 ura4-D18</i>	This study	JCF 10530
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3</i>	This study	JCF 10531
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 ago1::hygMX6</i>	This study	JCF 10532
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 ago1::hygMX6 dcr1::natMX6</i>	This study	JCF 10540
<i>trt1::his3 ura4+ clr3::natMX6</i>	This study	JCF 10541
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 clr3::natMX6</i>	This study	JCF 10543
<i>ade6-M210 dcr1::hygMX6 clr3::natMX6</i>	This study	JCF 10548
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 clr3::kanMX6</i>	This study	JCF 10550
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 +URA4 plasmid</i>	This study	JCF 10552
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 +rad51 URA4 plasmid</i>	This study	JCF 10553
<i>ura4-D18 rad51::kanMX6 +rad51 URA4 plasmid</i>	This study	JCF 10555
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 +rad51 URA4 plasmid</i>	This study	JCF 10557
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 rad51::kanMX6 +rad51 URA4 plasmid</i>	This study	JCF 10559
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::hygMX6 +rad51 URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10561

<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::hygMX6 rad51::kanMX6 +rad51 URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10563
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 dcr1::hygMX6 clr3::natMX6</i>	This study	JCF 10565
<i>dcr1::hygMX6 taz1-GFP-kan</i>	This study	JCF 10570
<i>leu1-32 ura4-D18 ori1 ade6-216 imr1R(Nco1)::ura4+ dcr1-ΔC33::nat</i>	This study	JCF 10575
<i>leu1-32 ura4-D18 ori1 ade6-216 imr1R(Nco1)::ura4+ Dcr1, D937A, D1127A-TAP-kan</i>	This study	JCF 10576
<i>trt1+/trt1::natMX6 rdp1::hygMX6</i>	This study	JCF 10577
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 rdp1::hygMX6</i>	This study	JCF 10578
<i>trt1::his3 ura4+ rad52::natMX6</i>	This study	JCF 10590
<i>trt1::his3 ura4+ rdp1::hygMX6</i>	This study	JCF 10597
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 rdp1::hygMX6</i>	This study	JCF 10598
<i>dcr1::hygMX6 taz1-mCherry:natMX6</i>	This study	JCF 10599
<i>dcr1, D937A, D1127A-TAP-kan ade6-M216 taz1-mCherry:natMX6</i>	This study	JCF 10603
<i>dcr1-ΔC33::nat taz1-GFP-kan</i>	This study	JCF 10606
<i>ade6-M210 rdp1::hygMX6</i>	This study	JCF 10611
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 poz1::kanMX6</i>	This study	JCF 10624
<i>trt1+/trt1::natMRX6 dcr1+/-::hygMX6 poz1+/-::kanMX6</i>	This study	JCF 10628
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 +rad52-URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10632
<i>rad52::leu2 ade-6 leu1-32 ura4-D18 his1- +rad52-URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10634
<i>trt1::his3 ura4+ rdp1::hygMX6</i>	This study	JCF 10636
<i>trt1::his3 ura4+ dcr1::natMX6</i>	This study	JCF 10637
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::hygMX6 +rad52-URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10638
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::hygMX6 clr3::natMX6</i>	This study	JCF 10639
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 +rad52-URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10640
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 rad52::natMX6 +rad52-URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10644
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 rad52::leu2 +rad52-URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10645
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::hygMX6 rad52::natMX6 +rad52-URA4 plasmid (cDNA plasmid)</i>	This study	JCF 10646
<i>trt1::his3 dcr1::hygMX +pkanMX-trt1+</i>	This study	JCF 10648
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 pot1-GFP-kanMX</i>	This study	JCF 10650

<i>ade6-M210 dcr1::hygMX6 trt1::natMX6</i>	This study	JCF 10674
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6</i>	This study	JCF 10675
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6</i>	This study	JCF 10676
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6</i>	This study	JCF 10677
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6</i>	This study	JCF 10678
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6</i>	This study	JCF 10679
<i>ade6-M210 ago1::hygMX6 trt1::natMX6</i>	This study	JCF 10682
<i>trt1::natMRX6 dcr1::hygMX6</i>	This study	JCF 10683
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 ago1::hygMX6 dcr1::natMX6</i>	This study	JCF 10684
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 rdp1::hygMX6 trt1::natMX6</i>	This study	JCF 10685
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 rdp1::hygMX6 trt1::natMX6</i>	This study	JCF 10686
<i>leu1-32 ura4-D18 ori1 ade6-216 imr1R(Nco1)::ura4+ dcr1-ΔC33::nat trt1::hygMX6</i>	This study	JCF 10687
<i>leu1-32 ura4-D18 ori1 ade6-216 imr1R(Nco1)::ura4+ dcr1-ΔC33::nat trt1::hygMX6</i>	This study	JCF 10688
<i>leu1-32 ura4-D18 ori1 ade6-216 imr1R(Nco1)::ura4+ Dcr1, D937A, D1127A-TAP-kan trt1::natMX6</i>	This study	JCF 10689
<i>leu1-32 ura4-D18 ori1 ade6-216 imr1R(Nco1)::ura4+ Dcr1, D937A, D1127A-TAP-kan trt1::natMX6</i>	This study	JCF 10690
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6 clr3::kanMX6</i>	This study	JCF 10693
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6 +pkanMX-trt1</i>	This study	JCF 13001
<i>ade6-M210 ago1::hygMX6 trt1::natMX6 +pkanMX-trt1</i>	This study	JCF 13003
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 ago1::hygMX6 dcr1::natMX6 +pkanMX-trt1</i>	This study	JCF 13004
<i>trt1::his3 ura4+ dcr1::hygMX6 +pkanMX-trt1</i>	This study	JCF 13006
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 tpz1::kanMX6</i>	This study	JCF 13010
<i>circular trt1::his3 leu1-32 his3-D1 ura4-D18 ade6-M210 tpz1::kanMX6</i>	This study	JCF 13011
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 tpz1::kanMX6</i>	This study	JCF 13016
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 tpz1::kanMX6</i>	This study	JCF 13020
<i>trt1::natMRX6 poz1::kanMX6</i>	This study	JCF 13023
<i>trt1::his3 ura4+ tpz1::kanMX6</i>	This study	JCF 13045
<i>leu1-32 ade6-210 poz1-W209A-13myc::kanMX6</i>	This study	JCF 13056
<i>leu1-32 ade6-210 poz1-W209A-13myc::kanMX6</i>	This study	JCF 13057
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 poz1-W209A-13myc::kanMX6</i>	This study	JCF 13058
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 poz1-W209A-13myc::kanMX6</i>	This study	JCF 13062

<i>ade6-M210 his3-D1 leu1-32 ura4-D18 poz1-W209A-13myc::kanMX6</i>	This study	JCF 13063
<i>ade6-M210/ade6-M216 his3-D1/his3-D1 leu1-32/leu1-32 ura4-D18/ura4-D18</i>	This study	JCF 13067
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6 poz1-W209A-13myc::kanMX6</i>	This study	JCF 13072
<i>ade6-M210 dcr1::hygMX6 trt1::natMX6 poz1-W209A-13myc::kanMX6</i>	This study	JCF 13078
<i>ade6-M216/ade6-M210 his+/his3-D1 leu1+/leu1-32 ura+/ura4-D18 dcr1+/dcr1::hygMX6</i>	This study	JCF 13088
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 poz1::natMX6</i>	This study	JCF 13093
<i>ade6-M216/ade6-M210 his+/his3-D1 leu1+/leu1-32 ura+/ura4-D18 dcr1+/dcr1::hygMX6 trt1+/trt1::natMX6</i>	This study	JCF 13098
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13113
<i>ade6-M210/ade6-M216 his3-D1/his3-D1 leu1-32/leu1-32 ura4-D18/ura4-D18 ccq1+/ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13114
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 pot1-GFP-kanMX ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13115
<i>ade6-M210/ade6-M216 his3-D1/his3-D1 leu1-32/leu1-32 ura4-D18/ura4-D18 pot1+/pot1-GFP-kanMX6 ccq1+/ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13118
<i>Reb1-GFP:natMX6 Hht1-RFP:kanMX6</i>	This study	JCF 13120
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 Reb1-GFP:natMX6 Hht1-RFP:kanMX6</i>	This study	JCF 13121
<i>Reb1-GFP:natMX6 Hht1-RFP:kanMX6 dcr1::hygMX6</i>	This study	JCF 13122
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13123
<i>ade6-M210/ade6-M216 his3-D1/his3-D1 leu1-32/leu1-32 ura4-D18/ura4-D18 tpz1/tpz1::natMX6</i>	This study	JCF 13128
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 ccq1-mCherry-GBP:hygMX6 pot1-GFP-kanMX6</i>	This study	JCF 13129
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 Reb1-GFP:natMX6 Hht1-RFP:kanMX6 dcr1::hygMX6</i>	This study	JCF 13132
<i>ade6-M210/ade6-M216 his3-D1/his3-D1 leu1-32/leu1-32 ura4-D18/ura4-D18 pot1+/pot1-GFP-kanMX6 ccq1+/ccq1-mCherry-GBP:hygMX6 poz1+/poz1::natMX6</i>	This study	JCF 13133
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 Reb1+/Reb1-GFP:natMX6 Hht1+/Hht1-RFP:kanMX6 dcr1+/dcr1::hygMX6 ccq1+/ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13138
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 ccq1-mCherry-GBP:hygMX6 pot1-GFP-kanMX6 poz1::natMX6</i>	This study	JCF 13140

<i>ade6-M210 his3-D1 leu1-32 ura4-D18 pot1-GFP-kanMX ccq1-mCherry-GBP:hygMX6 poz1::natMX6</i>	This study	JCF 13143
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 Reb1-GFP:natMX6 ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13145
<i>ade6-? his3-D1 leu1-32 ura4-D18 Reb1-GFP:natMX6 ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13148
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 Reb1-GFP:natMX6 ccq1-mCherry-GBP:hygMX6 clr3::kanMX6</i>	This study	JCF 13152
<i>ade6-? his3-D1 leu1-32 ura4-D18 Reb1-GFP:natMX6 ccq1-mCherry-GBP:hygMX6 dcr1::kanMX6</i>	This study	JCF 13154
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 Reb1-GFP:natMX6 clr3::kanMX6</i>	This study	JCF 13156
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 Reb1-GFP:natMX6 ccq1-mCherry-GBP:hygMX6 clr3::kanMX6</i>	This study	JCF 13157
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 Reb1-GFP:natMX6</i>	This study	JCF 13172
<i>ade6-M210/ade6-M216 his3-D1/his3-D1 leu1-32/leu1-32 ura4-D18/ura4-D18 reb1/reb1-GFP:natMX6 ccq1/ccq1-mCherry-GBP:hygMX6</i>	This study	JCF 13183
<i>trt1::his3 swi6-GFP-kanMX hht1-RFP-hygMX dcr1::natMX6</i>	This study	JCF 13184
<i>trt1::his3 swi6-GFP-kanMX hht1-RFP-hygMX clr3::natMX6</i>	This study	JCF 13189
<i>ade6-M210/ade6-M216 leu1-32/leu1-32 ura4-D18/ura4-D18 reb1/reb1-GFP:natMX6 ccq1/ccq1-mCherry-GBP:hygMX6 trt1::his3/his3-D1</i>	This study	JCF 13191
<i>swi6-GFP-kanMX hht1-RFP-hygMX dcr1::natMX6</i>	This study	JCF 13193
<i>swi6-GFP-kanMX hht1-RFP-hygMX clr3::natMX6</i>	This study	JCF 13195
<i>h- ade6-M210 his3-D1 leu1-32 ura4-D18 swi6-GFP-KanMx reb1-TdTomato-NatMX</i>	This study	JCF 17656
<i>h- ade6-M210 his3-D1 leu1-32 ura4-D18 swi6-GFP-KanMx reb1-TdTomato-NatMX</i>	This study	JCF 17657
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 swi6-GFP-KanMx reb1-TdTomato-NatMX</i>	This study	JCF 17658
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 swi6-GFP-KanMx reb1-TdTomato-NatMX</i>	This study	JCF 17659
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 dcr1::HygMx swi6-GFP-KanMx reb1-TdTomato-NatMX</i>	This study	JCF 17678
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3 dcr1::HygMx swi6-GFP-KanMx reb1-TdTomato-NatMX</i>	This study	JCF 17679
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::His3 clr3::NatMX swi6-GFP-KanMx</i>	This study	JCF 17970
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::His3 clr3::NatMX Swi6-GFP-KanMx</i>	This study	JCF 17971
<i>taz1-mCherry-natR leu1-32 ura4-D18</i>	This study	JCF 2498

<i>ade6-M210 his3-D1 leu1-32 ura4-D18</i>	Jain et al., 2010	JCF 108
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3</i>	Jain et al., 2010	JCF 8524
<i>trt1::his3 leu1-32 his3-D1 ura4-D18 ade6-M210</i>	Jain et al., 2010	JCF 909
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::his3</i>	Jain et al., 2010	JCF 8525
<i>trt1::his3 ura4+</i>	Jain et al., 2010	JCF 8500
<i>ade6-M210 his3-D1 leu1-32 ura4-D18 trt1::hygMX6</i>	Jain et al., 2010	JCF 8546

### **Supplemental Table S1.**

List of strains used in this study.

**Table S2**

<b>Oligonucleotides</b>	<b>Source</b>	<b>IDENTIFIER</b>
Probe I: PCR product of primers (5' to 3') caatcatctttccatgaaccggc and cctattacaataacttctcaatcgg	Ferreira and Cooper, 2001	N/A
Probe L: PCR product of primers (5' to 3') gccacataaaaagtgcgattggcgg and ggaactgaccgttatagcctccac	Ferreira and Cooper, 2001	N/A
Probe M: PCR product of primers (5' to 3') cgacttcatgtttacttccaagcc and ggaaagtgtgacaatgtcagtgctg	Ferreira and Cooper, 2001	N/A
Probe C: PCR product of primers (5' to 3') ccataaaagtagcagccagatcccc and cctctgtaggtggattgactagg	Ferreira and Cooper, 2001	N/A
Probe STE1: Apal digestion fragment from pNSU70	Nakamura et al., 1998	N/A
Probe STE2: Nsil digestion fragment from pNSU70	Nakamura et al., 1998	N/A
Probe STE3: EcoRV-HindIII digestion fragment from pNSU70	Nakamura et al., 1998	N/A
Probe rDNA: HindIII fragment from Yip10.4	Toda et al., 1984	N/A
Probe ACT1: PCR product of act1 gene (AGAAGAAATCGCAGCGTTGG + ACGGTAAACGATACCAGGTC)	This study	N/A
Probe TELO: 450bp synthetic telomeric oligonucleotide probe, made of ligated oligonucleotides of 49bp of telomeric sequence	Miller et al., 2006	N/A
18s qPCR: oligos 18s C-F (ACTTTGAGCCTGGTCGACTG) + 18s C-R (CATTACGGCGGTCCTAGAAA)	This study	N/A
SubTELO qPCR: oligos BAM 136 (GTGTGGAATTGAGTATGGTGAA) + STE1 CF (GGGGGCATTGTATTTGTGAA)	This study	N/A
Dg/dh qPCR: oligos DG-RT1 (CCGAATCAACAGGCCATAGT) + DG-RT2 (TGTTGTTGCTTTCACATTTGC)	This study	N/A

**Supplemental Table S2.**

List of oligonucleotides and probes used in this study.

**Table S3**

REAGENT	SOURCE	IDENTIFIER
Mouse anti-V5 tag antibody	Serotec	
Trichostatin A (TSA)	Sigma-Aldrich	Cat#58880-19-6
Methyl methanesulfonate (MMS)	Sigma-Aldrich	Cat#66-27-3
5-Fluoroorotic Acid (FOA)	US biological, Thermo Fisher	Cat#207291-8-4
nourseothricin dihydrogen sulfate (NAT)	Fisher	Cat#5029426
G418 sulfate (Geneticin)	Invitrogen/Life Technologies	Cat#10131027
Hygromycin	Sigma-Aldrich	Cat#H7772
Pan mouse IgG-coated magnetic Dynabeads	ThermoFisher	Cat#11041
Proteinase K	Sigma-Aldrich	Cat#39450-01-6
RNase A	Roche	Cat#10109169001
Zymolyase-100T	Ambio	Cat#120493-1
MyTaq HS DNA polymerase	Bioline	Cat#BIO-21111
Expand™ High Fidelity PCR System	Roche	Cat#EHIFI-RO
Random prime labelling kit	Stratagene	Cat#600069
Phenylmethylsulfonyl fluoride (PMSF)	Sigma-Aldrich	Cat#P7626
NotI	NEB	Cat#R3189S
Apal	NEB	Cat#R0114L
HindIII	NEB	Cat#R3104L
EcoRV	NEB	Cat#R3195L
NsiI	NEB	Cat#R3127L
QIAquick PCR Purification Quick	Qiagen	Cat#28104
QIAquick Gel Extraction Kit	Qiagen	Cat#28704
TruSeq Nano DNA Library Prep Kit	Illumina	Cat#FC-121-4001

**Supplemental Table S3.**

List of reagents used in this study.



**Table S4**

<b>Software and Algorithms</b>		
Prism GraphPad 7.0	Graphing software	N/A
SoftWoRX 6.0	GE Healthcare	<a href="http://www.gelifesciences.com/webapp/wcs/stores/servlet/productById/en/GELifeSciences-us/29065728">http://www.gelifesciences.com/webapp/wcs/stores/servlet/productById/en/GELifeSciences-us/29065728</a>
BLAST sequence alignment program	NCBI	N/A
picard-tools MarkDuplicates	Picard tools	<a href="http://broadinstitute.github.io/picard">http://broadinstitute.github.io/picard</a>

**Supplemental Table S4.**

List of software and algorithms used in this study.