**Figure S1**  S288c with *FLO11pr^Sigma^::FLO11* is still fMAPK independent.  qPCR assay of *FLO11* transcript levels was performed on (A) S288c and (B) Sigma strains carrying *FLO11* promoter swaps.  Mean *FLO11* levels normalized to *ACT1* levels are presented ± SD.  Strains with their endogenous *FLO11* promoter are labeled with their relevant genotype.  Strains carrying a swapped *FLO11* promoter are labeled numerically: (1) S288c *FLO11pr^Sigma^::FLO11*; (2) S288c *FLO11pr^Sigma^::FLO11, tec1Δ*; (3) Sigma *FLO11pr^S288c^::FLO11*; (4) Sigma *FLO11pr^S288c^::FLO11, tec1Δ*.

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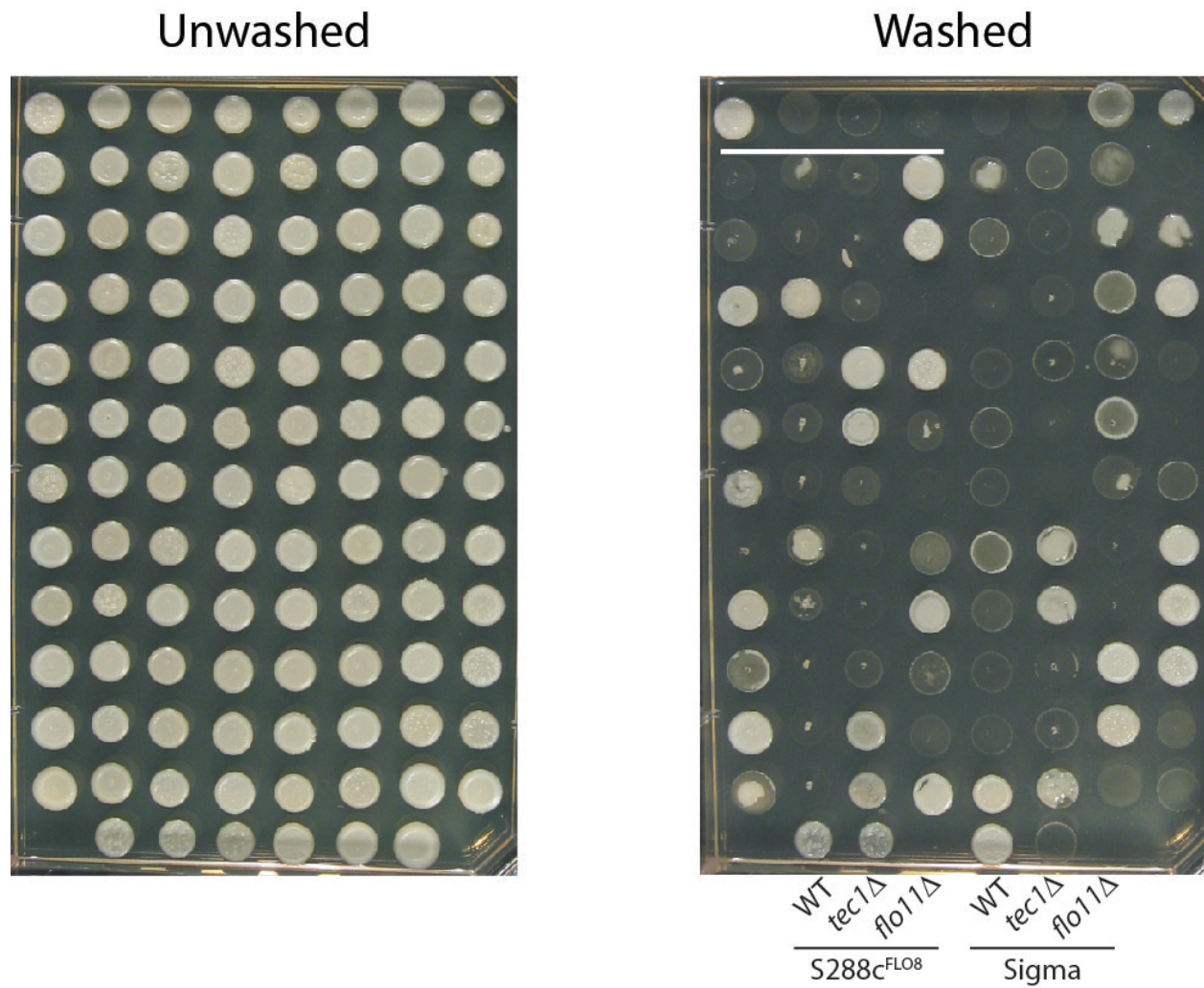
**Figure S2** *tec1Δ* bypass is a complex trait. Agar adhesion assays of 24 tetrads from an S288c *tec1Δ* x Sigma *tec1Δ* cross. Two complete tetrads per row with one example underlined. Parental strains and controls spotted on the bottom of the plate. The same plate is shown before and after washing.
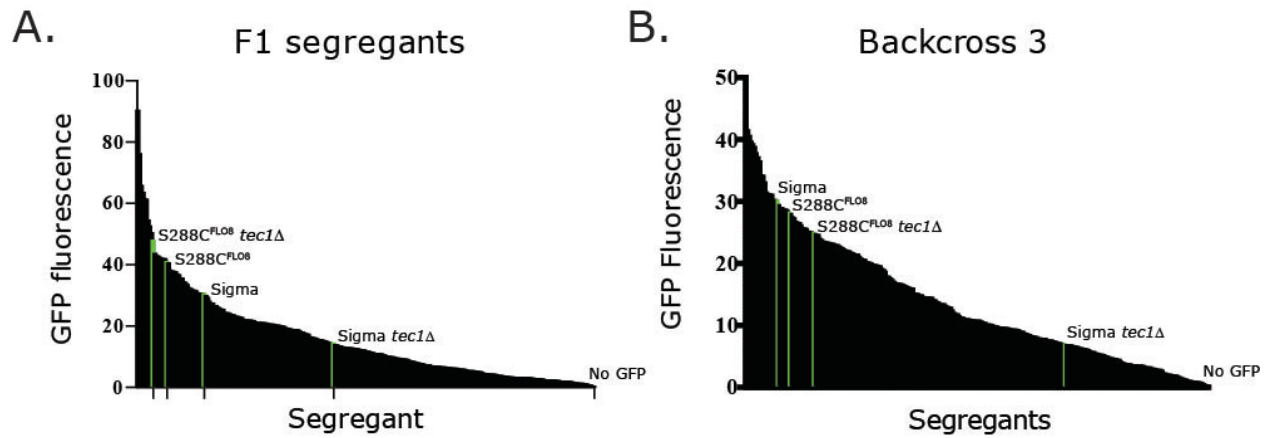
**Figure** S3    fMAPK bypass of *FLO11* expression is a complex quantitative trait.  GFP fluorescence, measured in arbitrary units for (A) 276 F1 meiotic progeny from a S288c / Sigma *FLO11pr::GFP* / *FLO11pr::GFP tec1Δ* / *tec1Δ* diploid or (B) 276 meiotic progeny from the third generation of backcrossing (see methods).  The average GFP fluorescence normalized to OD600 of 3 biological replicates are plotted.  The progeny are sorted from highest to lowest fluorescence.  Fluorescence of control strains are labeled and shown in green.

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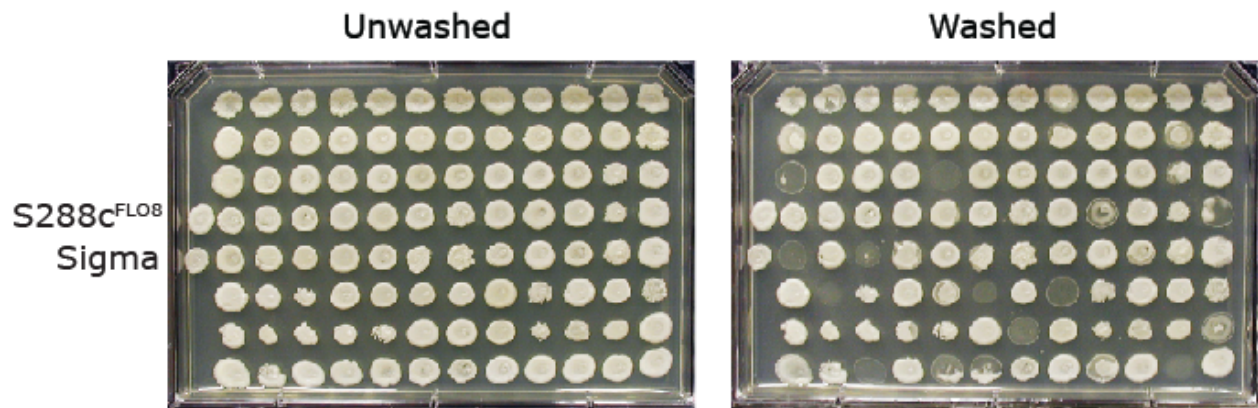
**Figure S4** Regulation of adhesion differs between S288c and Sigma. Adherent, wild-type S288c and Sigma were crossed and from 24 complete tetrads, 15/96 progeny show an adhesion defect. Each column contains two complete tetrads.

# RPI1
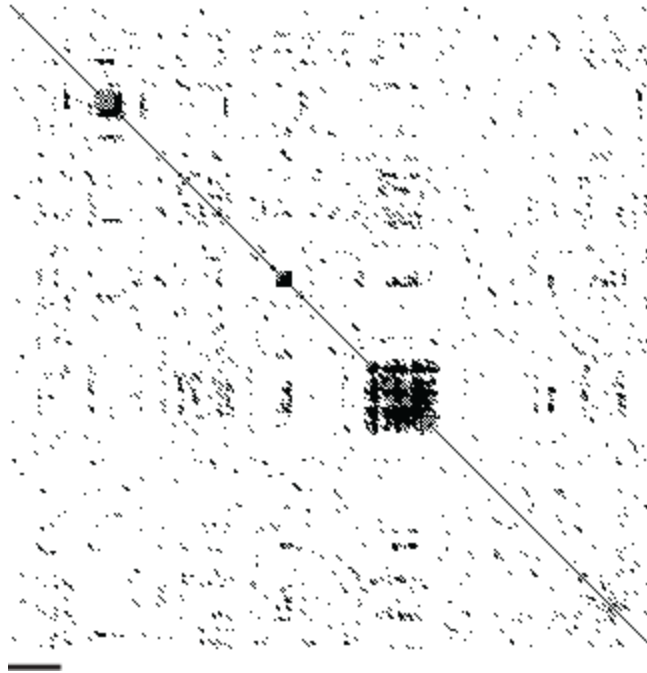


**Figure S5**  *RPI1* contains intragenic repeats.  Dot plot analysis of the S288c allele of *RPI1* nucleotide sequence compared against itself.  Repeat regions produce a characteristic box pattern. The horizontal bar represents 100 nt.  The plot was generated using http://www.vivo.colostate.edu/molkit/dnadot/ with a windows size of 9 and a mismatch limit of 2.

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# A

**Repeat #1**

```
S288c    TCCAGTTCAAATTCGAATTCGAACTCCAATTCTAATTCGAACTCCAACTCCAAC
w303     TCCAGTTCAAATTCGAATTCGAACTCCAATTCTAATTCGAACTCCAACTCCAAC
SK1      TCCAGTTCAAATTCGAATTCGAACTCCAATTCTAATTCGAACTCCAACTCCAAC
NCYC110  TCCAGTTCAAATTCGAATTCGAACTCCAATTCTAATTCGAACTCCAACTCCAAC
YJM789   TCCAGTTCAAATTCGAATTCGAACTCCAATTCTAATTCGAACTCCAACTCCAAC
RM11     TCCAGTTCTAATTCTAATTCGAACTCCAACTCCAAC------------------
y55      TCCAGTTCTAATTCTAATTCGAACTCCAACTCCAAC------------------
Sigma    TCCAGTTCTAATTCTAATTCGAACTCCAACTCCAAC------------------
              S  S  S  N  S  N  S  N  S  N  S  N  S  N  S  N
```

# B

**Repeat #2**

```
S288c    AACAAGAATGGTACTAATGATAATATTAATAACCATTATTATAATAATTGTAACAATAACAATAATAATATTAA-------------------------------------------------CAATAGTAACAATAGCAACAATAATAATAGCAATAATATTAATAGGAATAGTAATCATAGTACTAAT
w303     AACAAGAATGGTACTAATGATAATATTAATAACCATTATTATAATAATTGTAACAATAACAATAATAATATTAA-------------------------------------------------CAATAGTAACAATAGCAACAATAATAATAGCAATAATATTAATAGGAATAGTAATCATAGTACTAAT
SK1      AACAAGAATGGTACTAATGATAATATTAATAACCATTATTATAATAATAGTAACAATAACAATAATAATATTAA-------------------------------------------------CAATAGTAACAATAGCAACAATAATAATAGCAATAATATTAATAGGAATAGTAATCATAGTACTAAT
NCYC110  AACAAGAATGGTACTAATGATAATATTAATAACCATTATTATAATAATAGTAACAATAACAATAATAATATTAA-------------------------------------------------CAATAGTAACAATAGCAACAATAATAATAGCAATAATATTAATAGGAATAGTAATCATAGTACTAAT
YJM789   AACAAGAATGGTACTAATGATAATATTAATAACCATTATTATAATAATAGTAACAATAACAATAATAATATTAA---CAATAGTAACAATAATAA------------------------TAATAGTAACAATAGCAACAATAATAATAGCAATAATATTAATAGGAATAGTAATCATAGTACTAAT
RM11     AACAAGAATGGTACTAATGATAATATTAATAACCATTATTATAATAATAGTAACAATAACAATAATAATAATAAATAATAACAATAGTAA-----------------------------------CAATAATAATTAATAGTAACAATAATAATAGCAATAATATTAATAGGAATAGTAATCATAGTACTAAT
y55      AACAAGAATGGTACTAATGATAATATTAATAACCATTATTATAATAATAGTAACAATAACAATAATAATAATAAATAATAACAATAGTAACAATAATAATAATAGTAACAATAATAATAATAGTAACAATAATAATTAATAGTAACAATAATAATAGCAATAATATTAATAGGAATAGTAATCATAGTACTAAT
Sigma    AACAAGAATGGTACTAATGATAATATTAATAACCATTATTATAATAATAGTAACAATAACAATAATAATAATAAATAATAACAATAGTAACAATAATAATAATAGTAACAATAATAATAATAGTAACAATAATAATTAATAGTAACAATAATAATAGCAATAATATTAATAGGAATAGTAATCATAGTACTAAT
           N  K  N  G  T  N  D  N  I  N  N  H  Y  Y  N  N  S  N  N  N  N  N  N  N  N  N  S  N  N  N  N  N  S  N  N  N  N  N  S  N  N  N  N  N  S  N  N  N  N  S  N  N  I  N  R  N  S  N  H  S  T  N
```

**Figure S6** Comparison of *RPI1* repeat regions between different *S. cerevisiae* strains. The sequences for the repeat regions from *RPI1* were aligned using ClustalW. (A) 5' repeat region and (B) central repeat region. For repeat #1 the translation for the S288c sequence is shown, and for repeat #2 the translation for the Sigma sequence is shown. Strain names in blue are wild isolates and nucleotides in red represent nucleotide polymorphisms. In S288c, the repeats account for 16% of the coding sequence (195/1224 bases). The 5' repeat region consists of a hexanucleotide repeat. In S288c there are nine repeated units while in Sigma there are only six repeated units. The central repeat region consists of a trinucleotide repeat. In S288c there are 46 repeated units but in Sigma they have expanded to 63 repeated units. Both repeats encode primarily for serines and asparagines.
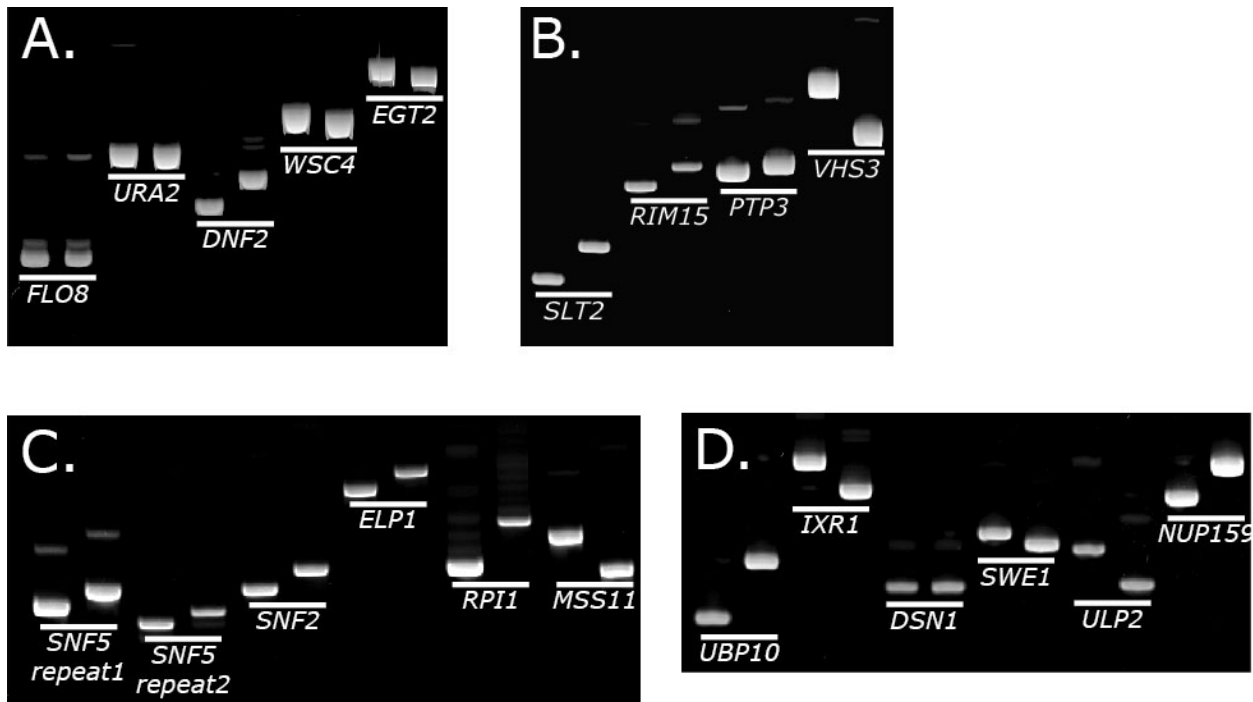
**Figure S7** Many genes have intragenic tandem repeats that differ in size between S288c and Sigma. Four of five gels used to examine the length differences between S288c and Sigma for 24 genes and *FLO8* which was used as a control for a gene without repeats. 22/24 genes had the predicted repeat length differences. The gene *SNF5* has two repeat regions that both changed in size. For each pair the left sample is S288c and the right sample is Sigma.

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**Table S1   Deletions leading to an Ahs- phenotype only in S288c.**

| | | | |
|---|---|---|---|
| YAL054C | YIR020C | YOR082C | YBR231C |
| YNL020C | YJL218W | YOR154W | YBR289W |
| YOR043W | YJR018W | YOR183W | YDR073W |
| YDR226W | YJR054W | YOR186W | YDR334W |
| YBL080C | YJR080C | YOR200W | YJL176C |
| YKR039W | YKL023W | YOR225W | YOR290C |
| YBR068C | YKL044W | YOR258W | YOL012C |
| YDR127W | YKL090W | YOR285W | YDL074C |
| YPR060C | YKL094W | YPL017C | YDR469W |
| YPR020W | YLL030C | YPL068C | YDR207C |
| YLR431C | YLL055W | YPL182C | YBR107C |
| YCR002C | YLR021W | YPL184C | YDR254W |
| YAR030C | YLR065C | YPL216W | YDR318W |
| YBL031W | YLR125W | YPL220W | YGR275W |
| YBL046W | YLR168C | YPL246C | YPR046W |
| YBR033W | YLR184W | YPL257W | YER068W |
| YBR139W | YLR352W | YPL260W | YAL012W |
| YCL005W | YLR358C | YPR170C | YER056C |
| YCL036W | YLR374C | YER086W | YMR032W |
| YCR016W | YLR434C | YDR200C | YNL166C |
| YCR095C | YML010C-B | YCL058C | YNL229C |
| YDL021W | YML010W-A | YBL006C | YLR420W |
| YDL073W | YMR135W-A | YPR030W | YML106W |
| YDR003W | YMR158C-B | YER083C | YJL115W |
| YDR248C | YMR191W | YCR017C | YOL090W |
| YDR514C | YMR316C-A | YGL027C | YLR418C |
| YER039C | YMR326C | YHR181W | YBR228W |
| YER048C | YNL023C | YDL225W | YGL058W |
| YER060W | YNL170W | YBR200W | YML021C |
| YFL015C | YNL175C | YHL003C | YOR144C |
| YGL214W | YNL226W | YLL026W | YDR364C |
| YGR071C | YNR025C | YJR060W | YCL061C |
| YHL017W | YOL032W | YDR176W | YMR048W |
| YHR080C | YOL042W | YGL066W | YBL082C |
| YHR210C | YOL048C | YLR055C | YKL213C |
| YIL059C | YOL159C | YNL107W | YDR069C |
| YIL086C | YOR021C | YDR485C | YDR320C |
| YIR014W | YOR029W | YML041C | YNR006W |

| | | | |
|---|---|---|---|
| YJL095W | YDR432W | YPR087W | YBR053C |
| YKR054C | YDR195W | YER020W | |
| YBR159W | YGR019W | YML035C | |
| YBR171W | YPR101W | YBR221C | |
| YGR135W | YJR117W | YIL119C | |
| YFL011W | YPR049C | YKL109W | |
| YHR094C | YOL044W | YAL024C | |
| YBR133C | YGR004W | YER059W | |
| YOR178C | YNL173C | YPL219W | |
| YNL117W | YER053C | YMR179W | |
| YLR330W | YFL031W | YML014W | |
| YJL062W | YAL013W | YOL105C | |
| YDL035C | YDR174W | YOR008C | |
| YOR101W | YNR052C | YGL244W | |
| YKR029C | YKL043W | YHR087W | |
| YOL064C | YJL129C | YNR060W | |
| YGL045W | YDL230W | YBL075C | |
| YHL007C | YJL183W | YGR055W | |
| YOL101C | YKL139W | YGL033W | |
| YKR042W | YIL148W | YLR453C | |
| YOL091W | YGL236C | YGR104C | |
| YDL115C | YCL037C | YHR041C | |
| YLR219W | YDR500C | YPL144W | |
| YML128C | YHL033C | YPL258C | |
| YMR167W | YKL167C | YNL248C | |
| YMR031W-A | YLR185W | YJL189W | |
| YJR051W | YNL265C | YGR054W | |
| YLR180W | YOR096W | YNL125C | |
| YGR163W | YOR182C | YOR081C | |
| YAL047C | YPL090C | YPL212C | |
| YPL241C | YOR138C | YDR354W | |
| YLR368W | YHR034C | YKL211C | |
| YDR258C | YOR288C | YCL075W | |
| YNL076W | YMR091C | YDR330W | |
| YCL016C | YER110C | YHL016C | |
| YDR378C | YGL153W | YPR036W | |
| YKL009W | YIR004W | YLR373C | |
| YMR125W | YLR024C | YMR174C | |
| YBR034C | YGL203C | YHL019C | |

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**Table S2   Deletions leading to an Ahs- phenotype only in Sigma.**

| | | | |
|---|---|---|---|
| YKR024C | YGR162W | YPL031C | YIR021W |
| YHR114W | YAL048C | YDL044C | YER161C |
| YML022W | YPL259C | YBR191W | YGR123C |
| YLR278C | YLR370C | YGR105W | YDL069C |
| YGL258W | YNL271C | YKL119C | YDR197W |
| YGR271C-A | YMR267W | YOR085W | YML024W |
| YML117W | YDR079W | YNR051C | YBR165W |
| YOR267C | YDR529C | YEL059C-A | YER154W |
| YMR044W | YPL132W | YPL086C | YLR384C |
| YOR213C | YLR204W | YPL024W | YDR074W |
| YMR127C | YLR315W | YIL008W | YHL034C |
| YCR009C | YER156C | YFR019W | YDR096W |
| YCR088W | YLR375W | YPL193W | YDL081C |
| YIL034C | YFR048W | YJL124C | YOL023W |
| YMR008C | YGL188C-A | YPR040W | YIL125W |
| YGR040W | YGL211W | YDR512C | YDR120C |
| YGL014W | YGL228W | YNL098C | YGR020C |
| YDR005C | YKL037W | YOL051W | YOR332W |
| YNL053W | YOR141C | YDR289C | YFL054C |
| YOR002W | YKL110C | YGR257C | YGR272C |
| YOR067C | YDR276C | YLL041C | YBR026C |
| YDL159W | YBL007C | YNL037C | YHR011W |
| YGL019W | YBR245C | YOR136W | YCR105W |
| YGR188C | YGR062C | YEL051W | YPR116W |
| YLR362W | YLR337C | YKL080W | YCR079W |
| YHR021C | YLR056W | YDL067C | YER014C-A |
| YPR043W | YGR014W | YLR295C | YLR390W-A |
| YBR189W | YGR037C | YBL099W | YGR229C |
| YGR232W | YHL038C | YDR298C | YDR359C |
| YER118C | YGL252C | YBL066C | YLR385C |
| YMR312W | YAL002W | YBR162C | YOL068C |
| YPL101W | YOR334W | YLR404W | YMR263W |
| YKL143W | YOL115W | YNL097C | YCR077C |
| YDR184C | YGL003C | YGR180C | YHR120W |
| YDL190C | YPL005W | YCR086W | YER061C |
| YEL060C | YDR140W | YDR129C | YHR067W |
| YDL005C | YAL023C | YML008C | YBL071W-A |
| YGL025C | YDR477W | YGL084C | YER014W |

| | | | |
|---|---|---|---|
| YEL065W | YBR163W | YDR405W | YMR287C |
| YOR198C | YER087W | YER050C | YPL029W |
| YPL055C | YGL107C | YGR215W | YML055W |
| YDR393W | YGR102C | YHR147C | YLL033W |
| YHL020C | YMR066W | YHR168W | YMR228W |
| YGL246C | YMR098C | YIL093C | YJL102W |
| YER117W | YOR205C | YKL003C | YLR069C |
| YDL191W | YLR443W | YKL138C | YOR187W |
| YGL129C | YIL084C | YKL155C | YDR470C |
| YMR158W | YOR330C | YKL170W | YDR268W |
| YPL104W | YLR382C | YKR006C | YPL097W |
| YPR166C | YKL134C | YLR312W-A | YPL019C |
| YDR175C | YNL073W | YLR439W | YGR219W |
| YPL040C | YGR171C | YMR024W | YAL004W |
| YPL118W | YCR028C-A | YMR193W | |
| YLR192C | YDR296W | YNL005C | |
| YJL180C | YOL095C | YNL081C | |
| YER017C | YGL219C | YNL252C | |
| YMR089C | YNL213C | YPL173W | |
| YNL121C | YGR101W | YPR047W | |
| YPL148C | YLL006W | YBL090W | |
| YIL049W | YOL009C | YDR115W | |
| YNL119W | YOR211C | YDR337W | |
| YHR084W | YML062C | YEL050C | |
| YHR111W | YLR435W | YGL143C | |
| YIR019C | YDL090C | YGR165W | |
| YFL026W | YBR146W | YGR220C | |
| YNL180C | YBL038W | YHR091C | |
| YDR194C | YBR251W | YJL063C | |
| YKL149C | YBR268W | YKR085C | |
| YKL194C | YBR282W | YLR139C | |
| YPR163C | YCR003W | YMR097C | |
| YBR127C | YCR024C | YNL177C | |
| YMR293C | YCR046C | YOR150W | |
| YKL055C | YCR071C | YPR100W | |
| YOR221C | YDL045W-A | YPL002C | |
| YPL271W | YDR237W | YBL022C | |
| YDR332W | YDR322W | YBR083W | |
| YOR305W | YDR347W | YGL064C | |

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**Table S3   Deletions leading to an Ahs- phenotype only in both S288c and Sigma.**

| | | | |
|---|---|---|---|
| YKL007W | YKR001C | YDR065W | YDR462W |
| YBR023C | YKL185W | YMR116C | YNR037C |
| YPL203W | YNL183C | YDL233W | YLR417W |
| YBL058W | YDR392W | YEL007W | YMR164C |
| YGR056W | YOR035C | YGR122W | YGR200C |
| YOL001W | YJL140W | YBR095C | YGR063C |
| YOL072W | YHR167W | YOR275C | YMR063W |
| YLR357W | YKL204W | YOR030W | YHL027W |
| YOL076W | YJR113C | YLR025W | YNL294C |
| YPL181W | YCL008C | YMR077C | YJL175W |
| YDR350C | YJR102C | YCR084C | |
| YMR154C | YOL004W | YDL006W | |

**Table S4  ORFs with intragenic repeat length differences between S288c and Sigma.**

| | | |
|---|---|---|
| YAL035W | YOR156C | YJL162C |
| YAL064W-B | YOR290C | YKL028W |
| YBL011W | YPL049C | YKL032C |
| YBR017C | YPL229W | YKL105C |
| YBR030W | YPR142C | YKR092C |
| YBR212W | YPR143W | YKR102W |
| YCR067C | YPR152C | YLL010C |
| YDL005C | YAL065C | YLR055C |
| YDL035C | YAR050W | YLR106C |
| YDL122W | YBR289W | YLR114C |
| YDR133C | YCL043C | YLR177W |
| YDR134C | YDL037C | YLR406C-A |
| YDR232W | YDL039C | YML049C |
| YDR273W | YDL058W | YML113W |
| YDR299W | YDR093W | YMR016C |
| YEL007W | YDR150W | YMR044W |
| YFL024C | YDR420W | YMR124W |
| YFL033C | YDR517W | YMR173W |
| YGL013C | YER011W | YMR173W-A |
| YGL237C | YER030W | YMR317W |
| YGR014W | YER075C | YNL271C |
| YHL020C | YFL010C | YNL327W |
| YHR030C | YFL010W-A | YNR052C |
| YJL187C | YGL014W | YOR010C |
| YKL023W | YGR160W | YOR054C |
| YKL108W | YHL028W | YOR113W |
| YKL163W | YHR077C | YOR267C |
| YKR072C | YIL011W | YPL216W |
| YLL008W | YIL031W | YPR021C |
| YLR175W | YIL115C | YPR123C |
| YLR330W | YIL119C | YPR124W |
| YML074C | YIR010W | |
| YMR070W | YIR019C | |
| YMR136W | YIR023W | |
| YMR164C | YJL020C | |
| YNL186W | YJL078C | |
| YOL051W | YJL123C | |
| YOR053W | YJL130C | |

**Table S5  List of strains used in this study**

| Strain | Genotype | Source |
|---|---|---|
| BY4741 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 flo8*-1 | Brachmann et al. (1998) |
| yBC37 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 FLO8* | this study |
| yBC06A10 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 FLO8 tec1Δ*::KanMX4 | this study |
| yBC06B5 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 FLO8 ste7Δ*::KanMX4 | this study |
| yBC06G7 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 FLO8 ste11Δ*::KanMX4 | this study |
| yBC07A3 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 FLO8 kss1Δ*::KanMX4 | this study |
| yBC06B5 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 FLO8* ste12Δ::KanMX4 | this study |
| yBC0192 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 flo11*pr[S288c]*Δ*::*FLO11*pr[Sigma] *FLO8* | this study |
| yBC0195 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 flo11*pr[S288c]*Δ*::*FLO11*pr[Sigma]*tec1Δ*::KanMX4 *FLO8* | this study |
| yBC11E2 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 flo11Δ*::GFP-*URA3 FLO8* | this study |
| yBC11H2 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0  flo11Δ*::GFP-*URA3 tec1Δ*::KanMX4 *FLO8* | this study |
| yBC16A3 | S288c *MAT***a** *ura3Δ0 FLO8* | this study |
| yBC16F4 | S288c *MAT***a** */α  ura3Δ0/ura3Δ0 FLO8/FLO8* | this study |
| yBC20A1 | S288c *MAT***a** *ura3Δ0 tec1Δ*::hyg *FLO8* | this study |
| yBC20D1 | S288c *MATα ura3Δ0 tec1Δ*::hyg *FLO8* | this study |
| yBC20A3 | S288c *MAT***a** */α  ura3Δ0/ura3Δ0 tec1Δ*::hyg/*tec1Δ*hyg *FLO8/FLO8* | this study |
| yBC11E8 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 flo11Δ*::*HIS3*PEST *FLO8* | this study |
| yBC11H8 | S288c *MAT***a** *his3Δ1 leu2Δ0 ura3Δ0 met15Δ0 flo11Δ*::*HIS3*PEST *tec1Δ*::KanMX4 *FLO8* | this study |
| yBC18A1 | S288c *MAT***a** *ura3Δ0 rpi1Δ*::*URA3 FLO8* | this study |
| yBC18A6 | S288c *MAT***a** *ura3Δ0 rpi1Δ*::*RPI1*[Sigma] *FLO8* | this study |
| yBC18A8 | S288c *MAT***a** *ura3Δ0 rpi1Δ*::*RPI1*[Sigma] *tecΔ1*::KanMX4 *FLO8* | this study |
| yBC29A9 | S288c *MAT***a** *ura3Δ0 RPI1*-3xFLAG-*URA3 FLO8* | this study |
| yBC29D9 | S288c *MAT***a** *ura3Δ0 rpi1Δ*::*RPI1*[Sigma]-3xFLAG-*URA3 FLO8* | this study |
| 10560-6B | Sigma *MATα his3*::hisG *leu2*::hisG *trp1*::hisG *ura3*-52 | Fink Collection |
| yBC0172 | Sigma *MAT***a** *his3*::hisG *leu2*::hisG *trp1*::hisG *ura3*-52 | this study |
| Sigma *tec1Δ* | *MAT***a** *can1Δ*::*STE2pr-Sphis5 lyp1Δ*::*STE3pr-LEU2 his3*::hisG *leu2Δ ura3Δ tec1Δ*::KanMX4 | Dowell and Ryan et al. (2010) |
| Sigma *ste7Δ* | *MAT***a** *can1Δ*::*STE2pr-Sphis5 lyp1Δ*::*STE3pr-LEU2 his3*::hisG *leu2Δ ura3Δ ste7Δ*::KanMX4 | Dowell and Ryan et al. (2010) |
| Sigma *ste11Δ* | *MAT***a** *can1Δ*::*STE2pr-Sphis5 lyp1Δ*::*STE3pr-LEU2 his3*::hisG *leu2Δ ura3Δ ste11Δ*::KanMX4 | Dowell and Ryan et al. (2010) |
| Sigma *kss1Δ* | *MAT***a** *can1Δ*::*STE2pr-Sphis5 lyp1Δ*::*STE3pr-LEU2 his3*::hisG *leu2Δ ura3Δ kss1Δ*::KanMX4 | Dowell and Ryan et al. (2010) |

| | | |
|---|---|---|
| Sigma *ste12Δ* | *MAT**a** can1Δ*::*STE2pr-Sphis5 lyp1Δ*::*STE3pr-LEU2 his3*::hisG *leu2Δ ura3Δ ste12Δ*::KanMX4 | Dowell and Ryan et al. (2010) |
| yBC0193 | Sigma *MAT**a** his3*::hisG *leu2*::hisG *trp1*::hisG *ura3*-52 *flo11*pr[Sigma]*Δ*::*FLO11*pr[S288c] | this study |
| yBC0196 | Sigma *MAT**a** his3*::hisG *leu2*::hisG *trp1*::hisG *ura3*-52 *flo11*pr[Sigma]*Δ*::*FLO11*pr[S288c] *tec1Δ*::KanMX4 | this study |
| yBC11G1 | Sigma *MAT**a** his3*::hisG *leu2*::hisG *trp1*::hisG *ura3*-52 *flo11Δ*::GFP-*URA3* | this study |
| yBC11B2 | Sigma *MAT**a** his3*::hisG *leu2*::hisG *trp1*::hisG *ura3*-52 *flo11Δ*::GFP-*URA3 tec1Δ*::KanMX4 | this study |
| yBC16H3 | Sigma *MAT**a** ura3*-52 | this study |
| yBC16B4 | Sigma *MATα ura3*-52 | this study |
| yBC16G4 | Sigma *MAT**a** /α ura3*-52/*ura3*-52 | this study |
| yBC20G1 | Sigma *MAT**a** ura3*-52 *tec1Δ*::hyg | this study |
| yBC20B2 | Sigma *MATα ura3*-52 *tec1Δ*::hyg | this study |
| yBC20C3 | Sigma *MAT**a** /α ura3*-52/*ura3*-52 *tec1Δ*::hyg/*tec1Δ*hyg *FLO8*/*FLO8* | this study |
| yBC11A7 | Sigma *MAT**a** his3*::hisG *leu2*::hisG *trp1*::hisG *ura3*-52 *flo11Δ*::*HIS3*-PEST | this study |
| yBC11D7 | Sigma *MAT**a** his3*::hisG *leu2*::hisG *trp1*::hisG *ura3*-52 *flo11Δ*::*HIS3*-PEST *tec1Δ*::KanMX4 | this study |
| yBC18G1 | Sigma *MAT**a** ura3*-52 *rpi1Δ*::*URA3* | this study |
| yBC18G6 | Sigma *MAT**a** ura3*-52 *rpi1Δ*::*RPI1*[S288c] | this study |
| yBC18G8 | Sigma *MAT**a** ura3*-52 *rpi1Δ*::*RPI1*[Sigma] *tecΔ*1::KanMX4 | this study |
| yBC29G9 | Sigma *MAT**a** ura3*-52 *RPI1*-3xFLAG-*URA3* | this study |
| yBC29B10 | Sigma *MAT**a** ura3*-52 *rpi1Δ*::*RPI1*[Sigma]-3xFLAG-*URA3* | this study |
| yBC09H1 | S288c[FLO8]/Sigma *MAT**a** /α ura3Δ*0/*ura3*-52 *his3Δ*0/*his3*::hisG *leu2Δ*0/*leu2*::hisG *met15Δ*0/*MET15 TRP1*/*trp1*::hisG *tec1Δ*::hyg/*tec1Δ*::hyg *flo11Δ*::GFP-*URA3*/*flo11Δ*::GFP-*URA3* | this study |
| yBC03A10 | S288c[FLO8]/Sigma *MAT**a** /α ura3Δ*0/*ura3*-52 *his3Δ*0/*his3*::hisG *met15Δ*0/*MET15 tec1Δ*::KanMX4/*tec1Δ*::KanMX | this study |

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**Table S6  List of oligonucleotides used in this study**

| Name | Sequence (5' to 3') | Description |
|---|---|---|
| BCP10 | agtgcttaaccggaacaaacc | *FLO8F* |
| BCP15 | tatgatcatgatttacgatgaccgt | *FLO8R* |
| BCP46 | ggaaacaagctgagctggac | Flanking *TEC1* |
| BCP47 | tcgtggtttcatccaagtga | Flanking *TEC1* |
| BCP191 | cccaagcgagacctagagtg | Flanking *STE12* |
| BCP192 | gaacatcgatgccttcacct | Flanking *STE12* |
| BCP195 | aagtgattcgtggggtaacg | Flanking *STE7* |
| BCP196 | tgggttattaatcgccttcg | Flanking *STE7* |
| BCP199 | attctcgcccaacttttcct | Flanking *STE11* |
| BCP200 | tcttcgtgcttccatctgtg | Flanking *STE11* |
| BCP236 | tccccttggtgaaagaaatg | Flanking *kss1* |
| BCP237 | ttgattacagtcgcgtcagc | Flanking *kss1* |
| BCP249 | GGTTCTAATTAAAATATACTTTTGTAGGCCTCAAAAATCCATATACGCACACTatgacagagcagaaagccctag | to replace the *FLO11* ORF with *HIS3* |
| BCP257 | tgatgagggtgaagggaaac | *RPI1* swap |
| BCP316 | ggtGCATCCAACTTGAACATTTCGAGAAAGC | For amplifying PEST seq from *CLN2* |
| BCP317 | CTATATTACTTGGGTATTGCCCATACC | For amplifying PEST seq from *CLN2* |
| BCP320 | GCTTTCTCGAAATGTTCAAGTTGGATGCacccataagaacacctttggtggag | linearize pRS313 to add PEST seq from *CLN2* |
| BCP321 | GGTATGGGCAATACCCAAGTAATATAGtgacaccgattatttaaagctg | linearize pRS313 to add PEST seq from *CLN2* |
| BCP324 | atttaagaatgaaaacatcgtaatgaagaaacgaacatgttggaattgtatcaCTATATTACTTGGGTATTGCCCATACC | To replace *FLO11* with *HIS3PEST* |
| BCP358 | CTTTTTTTTTAAGTCTTTTTTTTTTTTTTCTCATCATTTTATTACTGATATTTATAAAagattgtactgagagtgcac | *rpi1::ura3* |
| BCP359 | TAGAATTAAAGGGGTAGAAAATTTATGGTGGAGACTTCCCGATACATACTctgtgcggtatttcacaccg | *rpi1::ura3* |
| BCP360 | cgtattcgtttaactatttctcagtcc | *RPI1* swap |
| BCP412 | ctcaacagcagatccagcag | *MSS11F* repeats |
| BCP413 | gaaggcataagtccggttga | *MSS11R* repeats |
| BCP419 | cattgaagccgaacaagaatg | *RPI1F* repeats |
| BCP420 | cttgactgaatatgctctggtg | *RPI1R* repeats |
| BCP423 | tgcaagatttcaggctgttt | *SLT2F* repeats |
| BCP424 | atccacatctgaaggctgct | *SLT2R* repeats |
| BCP534 | GACTACAAGGATGATGACGATAAAGGTGACTATAAAGATCATGACATTGATTATAAAGACCATGACTAAgcaggtcgacaacccttaat | to build a C terminal flag tagging construct |
| BCP535 | GCGGCCGCATAGGCCACT | to build a C terminal flag tagging construct |
| BCP536 | ACCGTTGCATAATATGTCAACTTCAGACTCAGAAAATTTTATGCAACAACATgactacaaggatgatgacgata | C-terminally tag *RPI1* with FLAG |
| BCP537 | GAATTAAAGGGGTAGAAAATTTATGGTGGAGACTTCCCGATACATACTTTAgcggccgcataggccact | C-terminally tag *RPI1* with FLAG |
| BCP572 | cattaaacccgtggaacagc | *GAL11F* repeats |
| BCP573 | gggaataggtgccactttca | *GAL11R* repeats |

| BCP574 | ctgaatgggtggatccaaat | *URA2F* repeats |
|---|---|---|
| BCP575 | agaacagatggatcacctgga | *URA2R* repeats |
| BCP576 | gaaccggcaagacttaacca | *EPL1F* repeats |
| BCP577 | ttctgtttcgcttctgaattg | *EPL1R* repeats |
| BCP580 | ggacaggagcaggaagaaaa | *NUP159F* repeats |
| BCP581 | tccgaatgcagatgtaccaa | *NUP159R* repeats |
| BCP584 | atgggcataaacggtgacat | *VHS3F* repeats |
| BCP585 | agatcgctgtagccctcctt | *VHS3R* repeats |
| BCP586 | aacctgcacaggaaacatcc | *TFA1F* repeats |
| BCP587 | ctgaagcagtggcagtagca | *TFA1R* repeats |
| BCP588 | cccacgactacaagcacaaa | *WSC4F* repeats |
| BCP589 | cttgtagaaatgggggctga | *WSC4R* repeats |
| BCP628 | aaggctgcagtggtcaagtt | *DNF2F* repeats |
| BCP629 | atatctgaactgcccgatgg | *DNF2R* repeats |
| BCP632 | tacaatcccacgcagtttca | *ULP2F* repeats |
| BCP633 | ttccgtagttgcatcatcaaa | *ULP2R* repeats |
| BCP634 | gctggaaaacgactcaaagc | *SPT8F* repeats |
| BCP635 | agcagccttttgctcatcat | *SPT8R* repeats |
| BCP636 | atgatgagcaaaaggctgct | *SPT8F* repeats |
| BCP637 | tccattagcagaggcttcgt | *SPT8R* repeats |
| BCP638 | ctgtgtcaggacgccataga | *RIM15F* repeats |
| BCP639 | tccttggggaaaactgaaaa | *RIM15R* repeats |
| BCP640 | tcaaatgtgatgccaggttc | *SNF2F* repeats |
| BCP641 | ttgctcggcagtaaacattg | *SNF2R* repeats |
| BCP642 | agtacggggaccttgaacct | *SWE1F* repeats |
| BCP643 | tacgagaatccacgctttcc | *SWE1R* repeats |
| BCP644 | cagctggtgttcagggaaat | *PTP3F* repeats |
| BCP645 | ccaaatcaggccaatttttc | *PTP3R* repeats |
| BCP646 | acaacggcgatgaaaagaat | *MED2F* repeats |
| BCP647 | tgccgttatcgtcattgttg | *MED2R* repeats |
| BCP648 | aggctggataacctgcaaga | *DSN1F* repeats |
| BCP649 | ttgcagtcgcatctccacta | *DSN1R* repeats |
| BCP650 | caagaccattcgctgcagta | *IXR1F* repeats |
| BCP651 | taaggcgcttgttgttgttg | *IXR1R* repeats |
| BCP654 | atgggaactccaaccgtaca | *PGD1F* repeats |
| BCP655 | agtcgactgctgtgcgtaga | *PGD1R* repeats |
| BCP656 | ccaataacacccccgctacag | *PGD1F* repeats |
| BCP657 | tactgtggttgaggctgctg | *PGD1R* repeats |
| BCP658 | tagtttgaaggaacgcgaca | *UBP10F* repeats |
| BCP659 | gaacccaagttttcaccaatg | *UBP10R* repeats |
| BCP660 | atgattcagcaacgacacca | *SNF5F* repeats |

| BCP661 | aggaggaggggtagaagtcg | *SNF5R* repeats |
|--------|----------------------|-----------------|
| BCP662 | tgttgcacaacaacaagtgc | *SNF5F* repeats |
| BCP663 | gctgttgtcgctgtatttgg | *SNF5R* repeats |
| *FLO11* FW | cacttttgaagtttatgccacacaag | *FLO11* qPCR |
| *FLO11* RV | cttgcatattgagcggcactac | *FLO11* qPCR |
| *ACTI* FW | ctccaccactgctgaaagagaa | *ACT1* qPCR |
| *ACTI* RV | ccaaggcgacgtaacatagtttt | *ACT1* qPCR |