Table S1: Strain list

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|  | Name | Background | Specific genotype | source |
| 1 | BY4741 | BY4741 | *MATa, his30, ura30, leu20, met150* | (Brachmann *et al.* 1998) |
| 2 | BY4742 | BY4742 | *MATalpha, his30, ura30, leu20, lys20* | (Brachmann *et al.* 1998) |
| 3 | S288c | S288c | MATa (also known as GSY147) | (Kao *et al.* 2010) |
| 4 | RM11a | RM11 | *MATa ho::LoxP* | (Mortimer *et al.* 1994; Torok *et al.* 1996) |
| 5 | AWRI1631 | AWRI1631 | *MATa ho::LoxP* | (Borneman *et al.* 2008) |
| 6 | YJM789K5a | YJM789 | *MATa ho::HisG LYS2* | (Rong-Mullins *et al.* 2017) |
| 7 | BY4741 *med15* | BY4741 | *med15::KanR* | (Tong *et al.* 2001) |
| 8 | BY4741 *med15* | BY4741 | *med15::NatR* | this study |
| 9 | BY4742 *med15* | BY4742 | *med15::NatR* | this study |
| 10 | YJM789K5a *med15* | YJM789 | *MATa, med15::NatR, LYS2* | this study |
| 11 | Hybrid | BY4741xYJM789 | *MATa/MATalpha, HIS3/his3, URA3/ura3, LEU2/leu2, LYS2/lys2, LYS5/lys5* | this study |
| 12 | *MED15YJM789/* | BY4742xYJM789 | *MATa/MATalpha, HIS3/his3, URA3/ura3, LEU2/leu2, LYS2/lys2, MED15YJM789/med15BY::NatR* | this study |
| 13 | *MED15BY/* | BY4742xYJM789 | *MATa/MATalpha, HIS3/his3, URA3/ura3, LEU2/leu2, LYS2/lys2, MED15BY/med15YJM789::NATR* | this study |
|  | */* | BY4742xYJM789 | *MATa/MATalpha, HIS3/his3, URA3/ura3, LEU2/leu2, LYS2/lys2 med15YJM789::NatR/med15BY::KanR* | this study |
| 15 | *MED15YJM789-Myc/* | BY4742xYJM789 | *MATa/MATalpha, HIS3/his3, URA3/ura3, LEU2/leu2, LYS2/lys2, MET15/met15 pMED15YJM789-Myc:KanR/ med15BY::NatR* | this study |
| 16 | *MED15BY-Myc/* | BY4742xYJM789 | *MATa/MATalpha, HIS3/his3, URA3/ura3, LEU2/leu2, LYS2/lys2 MED15BY-Myc:KanR/ med15YJM789::NatR* | this study |
| 17 | BY4741 wildtype empty | BY4741 | pGS35 | this study |
| 18 | BY4741 *med15*empty | BY4741 | pGS35, *med15BY::NatR* | this study |
| 18 | BY4741 *med15* | BY4741 | *med15BY::NatR* | this study |
| 19 | BY4741 *MED15S288c-Myc* | BY4741 | *med15BY::NatR* p*MED15YJM789*-Myc (pGS35 with KanR, *URA3*) | this study |
| 20 | BY4741 *MED15YJM789-Myc* | BY4741 | *med15BY::NatR* p*MED15YJM789*-Myc (KanR, *URA3*) | this study |
| 21 | BY4741 *MED15BY-Myc* | BY4741 | *MED15BY-Myc::KanR* (genomic integration) | this study |
| 22 | BY4741 *MED15S288c* | BY4741 | *med15BY::NatR* p*MED15S288c* (KanR) | this study |
| 23 | BY4741 *MED15YJM789* | BY4741 | *med15BY::NatR* p*MED15S288c* (KanR) | this study |
| 24 | BY4741 *MED15BY/MED15YJM789*-Myc | BY4741 | p*MED15YJM789*-Myc | this study |
| 25 | BY4741 *MED15BY/MED15S288c* | BY4741 | p*MED15S288c*-Myc | this study |
| 26 | YJM789 wildtype empty | YJM789K5a | pGS35 | this study |
| 27 | YJM789 *med15* empty | YJM789K5a | *med15::NatR,* pGS35 | this study |
| 28 | YJM789 *MED15YJM789-*Myc | YJM789K5a | *med15::NatR,* p*MED15YJM789*-Myc | this study |
| 29 | YJM789 *MED15S288c* -Myc | YJM789K5a | *med15::NatR,* p*MED15S288c*-Myc | this study |
| 30 | YJM789 *MED15YJM789/MED15YJM789*-Myc | YJM789K5a | p*MED15YJM789*-Myc | this study |
| 31 | YJM789 *MED15YJM789/MED15S288c-*Myc | YJM789K5a | p*MED15S288c*-Myc | this study |
| 32 | BY4741 *MED15-Myc* | BY4741 | *pMED15BY-Myc* | this study |
| 33 | YJM789 *MED15-Myc* | YJM789 | *pMED15YJM789-Myc* | this study |
| 34 | *put4* | BY4741 | *put4::KanR* | (Tong *et al.* 2001) |
| 35 | *ptr2* | BY4741 | *ptr2::KanR* | (Tong *et al.* 2001) |
| 36 | *yjd1* | BY4741 | *ydj1::KanR* | (Tong *et al.* 2001) |
| 37 | *yjd1, MED15S288c-Myc* | BY4741 | *ydj1::HygR, med15::NatR* p*MED15YJM789*-Myc:KanR | this study |
| 38 | *yjd1, MED15YJM789-Myc* | BY4741 | *ydj1::HygR, med15::NatR* p*MED15YJM789*-Myc:KanR | this study |
| 39 | *snf1* | BY4741 | *snf1::HygR* | this study |
| 40 | *reg1* | BY4741 | *reg1::HygR* | this sudy |
| 41 | *med15, snf1* | BY4741 | *med15::NatR, snf1::HygR* | this study |
| 42 | *med15, reg1* | BY4741 | *med15::NatR, reg1::HygR* | this sudy |
| 43 | *snf1 MED15S288c-Myc* | BY4741 | *snf1::HygR, med15::NatR,* p*MED15S288c*-Myc | this study |
| 44 | *snf1, MED15YJM789-Myc* | BY4741 | *snf1::HygR, med15::NatR* p*MED15YJM789*-Myc | this study |
| 45 | *reg1, MED15S288c-Myc* | BY4741 | *reg1::KanR, med15::NatR* p*MED15S288c*-Myc | this study |
| 46 | *reg1, MED15YJM789-Myc* | BY4741 | *med3::KanR, med15::NatR* p*MED15YJM789*-Myc | this study |
| 47 | *snf1, MED15S288c* | BY4741 | *snf1::HygR, med15::NatR,* p*MED15S288c* | this study |
| 48 | *snf1, MED15YJM789* | BY4741 | *snf1::HygR, med15::NatR* p*MED15YJM789* | this study |
| 49 | *reg1, MED15S288c* | BY4741 | *reg1::KanR, med15::NatR* p*MED15S288c* | this study |
| 50 | *reg1, MED15YJM789* | BY4741 | *reg1::KanR, med15::NatR* p*MED15S288c* | this study |
| 51 | *yjd1* | BY4741 | *ydj1::KanR* | (Tong *et al.* 2001) |
| 52 | *yjd1, MED15S288c-Myc* | BY4741 | *ydj1::HygR, med15::NatR* p*MED15YJM789*-Myc | this study |
| 53 | *yjd1, MED15YJM789-Myc* | BY4741 | *ydj1::HygR, med15::NatR* p*MED15YJM789*-Myc | this study |