

Table S1: Oligonucleotide primers used in this study

| Primers to generate deletion cassettes – direction 5' → 3' | |
|---|---|
| M5 | ccgctgctaggcgcgccgtgACCAGTGTGATGGATATCTGC |
| M3 | gcagggatgcggccgctgacAGCTCGGATCCACTAGTAACG |
| 55_caSOD1s | CAAGTCCATCTAAAATGTGTTTG |
| 53_caSOD1as | cacggcgcgcctagcagcggCATTTTTAATTATATATATGTTGATAATTGAAT |
| 35_caSOD1s | gtcagcggccgcacccctgcTGAATAGATGAGCCAAGATTGC |
| 33_caSOD1as | ATGTGGGCATTATATTTGAACC |
| 55_caSOD2s | gtgtgatttctcacaccaatc |
| 53_caSOD2as | cacggcgcgcctagcagcggCATTGTTAATTATAGTACAATTGTCTTTAAT |
| 35_caSOD2s | gtcagcggccgcacccctgcTAAGTTACTGGACAAAAGTCAAGTACA |
| 33_caSOD2as | GAGTTCTAAACAATGGTACTTATCCTAC |
| 55_caSOD3s | AGGGAAACTTACCATGAATGTG |
| 53_caSOD3as | cacggcgcgcctagcagcggCATGGCGTGGTTGATAAGAG |
| 35_caSOD3s | gtcagcggccgcacccctgcGATACTCTGCGTAACATTGTGTGTA |
| 33_caSOD3as | CCAATTAACCCTTCGGTAGTG |
| 55_caSOD4s | CAGCATAAACCAATAACATTACTC |
| 53_caSOD4as | cacggcgcgcctagcagcggCATAGTAATAGTGTGTGTGATTAATAATC |
| 35_caSOD4s | gtcagcggccgcacccctgcTAGATAGAGAATAACTAGAACAAATCAAATG |
| 33_caSOD4as | CTTGAAAAAATATCATTAAAGTGAACG |
| 55_caSOD5s | CACGGCTGAGAGGTCCTACTAC |
| 53_caSOD5as | cacggcgcgcctagcagcggCATGATGAATGGTAAGTTAGATTG |
| 35_caSOD5s | gtcagcggccgcacccctgcAGATGAGCCATTTTACTTATTGTG |
| 33_caSOD5as | CATGTCTGTATAGGATAATGAAAGTG |
| 55_caSOD6s | GCTTGGTAGTGGTGGACTAGAG |
| 53_caSOD6as | cacggcgcgcctagcagcggCATCTTGCTGAGACGTTTAGTG |
| 35_caSOD6s | gtcagcggccgcacccctgcTAGTTGAACATAAATACTCTCACCC |
| 33_caSOD6as | CGATTGAGAGCTTGAGATTGAG |
| Control primers for verifying genomic deletions – direction 5' → 3' | |
| 5_SOD1s | CATTCAAAGACAGGTTGAATACAAC |
| 3_SOD1as | CAACAAAGTGATATTAATCGAATGAC |
| 5_SOD2s | CCAAATAGACATAAATTCGGTTC |
| 3_SOD2as | TCAATCATAATGTTTATAGGACTGG |
| 5_SOD3s | ATCTACTGGTATGAAGATTTGGTTAG |
| 3_SOD3as | CAAAGCTCCAATCAATCCAAG |
| 5_SOD4s | AACCTCCTAAACGCAACTGC |
| 3_SOD4as | GAACCAAGGAAGCATTGCC |
| 5_SOD5s | CGGCAATTGATTACGACAAG |
| 3_SOD5as | CTCACGTTTGCTTCTCGC |
| 5_SOD6s | GAGGCATCTGTTGCTTCCAC |
| 3_SOD6as | CGGTAGACTATTTGTCATTGGTG |
| Leu2as | GGAAACATTCACACAACCTGGG |
| Leu1s | ccggttacttgatcttcgg |
| His2as | CCCATACTCCTCACACAACAATCC |
| His1s | gccatgagcaccataaggacg |
| Primers to generate deletion cassettes with pSF2a SAT1-FLP – direction 5' → 3' | |
| 55_SacI_SOD4s | GAgagctcCAGCATAAACCAATAACATTACTC |
| 53_SOD4_NotIas | GAgcggccgcCATAGTAATAGTGTGTGTGATTAATAATC |

| | |
|---|---|
| 35_Apal_SOD4s | GAgggcccTAGATAGAGAATAACTAGAACAAATCAAATG |
| 33_SOD4_KpnIas | GAggtaccCTTGAAAAAATATCATTAAAGTGAACG |
| 55_SacI_SOD5s | GAgagctcCACGGCTGAGAGGTCACTAC |
| 53_SOD5_NotIas | GAgcggccgcCATGATGAATGGTAAGTTAGATTG |
| 35_Apal_SOD5s | GAgggcccAGATGAGCCATTTTACTTATTGTG |
| 33_SOD5_KpnIas | GAggtaccCATGTCTGTATAGGATAATGAAAGTG |
| 55_SacI_SOD6s | GAgagctcGCTTGGTAGTGGTGGACTAGAG |
| 53_SOD6_NotIas | GAgcggccgcCATCTTGCTGAGACGTTTAGTG |
| 35_Apal_SOD6s | GAgggcccTAGTTGAACATAAATACTCTCACCC |
| 33_SOD6_KpnIas | GAggtaccCGATTGAGAGCTTGAGATTGAG |
| SAT108as | CTCCATCACCCAGTTTAGTTGTACC |
| SAT101s | CTCAAGTCTCGAACGAAACAG |
| Primers for genomic reintegration cassettes at original loci – direction 5' → 3' | |
| 33_SOD5_PvuIas | GAcgatcgCATGTCTGTATAGGATAATGAAAGTG |
| SOD5_ct_Notas | GAgcggccgcATTTTATTTTCTTTTTTAAATCAAGGC |
| Primers for amplifying probes for Northern analysis – direction 5' → 3' | |
| Sod5_49s | GATGCACCAATCTCAACTG |
| Sod5_676as | CAGCAATGACACCAACTAC |
| Sod4_9s | CTTGTCTATTATTTCAATTGTTGC |
| Sod4_699as | CTAAATTAAGCAGCAACAACAC |
| ACT1_s | ATGGACGGTGGTATGTTTTAGT |
| ACT1_as | CAGAAGATTGAGAAGAAGTTTGC |

Table S2: Plasmids used in this study

| Plasmids | Relevant inserts and cloning sites | References |
|-----------------|--|-----------------------|
| pSFS2a-SAT1-FLP | | Reuss et al, 2004 |
| pSN40 | | Noble & Johnson, 2005 |
| pSN51 | | Noble & Johnson, 2005 |
| pSFS2a-SOD4 | <i>SacI</i> 5'SOD4 <i>NotI</i> -SAT1-FLP- <i>ApaI</i> 3'SOD4 <i>KpnI</i> | This study |
| pSFS2a-SOD5 | <i>SacI</i> 5'SOD5 <i>NotI</i> -SAT1-FLP- <i>ApaI</i> 3'SOD5 <i>KpnI</i> | This study |
| pSFS2a-SOD6 | <i>SacI</i> 5'SOD6ct <i>NotI</i> -SAT1-FLP- <i>ApaI</i> 3'SOD6 <i>KpnI</i> | This study |
| pSFS2a-SOD5rev | <i>SacI</i> 5'SOD5ct <i>NotI</i> -SAT1-FLP- <i>ApaI</i> 3'SOD5 <i>PvuI</i> | This study |

Table S3: Fungal strains used in this study

| Strains | Short Names | Genotypes | References |
|----------|--|--|-----------------------|
| SC5314 | | | Gillum, et al, 1984 |
| SN152 | <i>arg4Δ/Δ</i> <i>leu2Δ/Δ his1Δ/Δ</i> | <i>arg4Δ/arg4Δ, leu2Δ/leu2Δ, his1Δ/his1Δ,</i> <i>URA3/ura3Δ</i> | Noble & Johnson, 2005 |
| CA-IF100 | <i>arg4Δ/Δ LEU2</i> <i>HIS1</i> | <i>arg4Δ/arg4Δ, leu2Δ/leu2Δ::cmLEU2,</i> <i>his1Δ/his1Δ::cdHIS1, URA3/ura3Δ,</i> | This study |
| CA-IF001 | <i>sod1Δ</i> | SN152, <i>sod1Δ::cmLEU2/SOD1</i> | This study |
| CA-IF003 | <i>sod1Δ/Δ</i> | SN152, <i>sod1Δ::cmLEU2/sod1Δ::CdHIS1</i> | This study |
| CA-IF005 | <i>sod2Δ</i> | SN152, <i>sod2Δ::cmLEU2/SOD1</i> | This study |
| CA-IF007 | <i>sod2Δ/Δ</i> | SN152, <i>sod2Δ::cmLEU2/sod2Δ::CdHIS1</i> | This study |
| CA-IF009 | <i>sod3Δ</i> | SN152, <i>sod3Δ::cmLEU2/SOD2</i> | This study |
| CA-IF011 | <i>sod3Δ/Δ</i> | SN152, <i>sod3Δ::cmLEU2/sod3Δ::CdHIS1</i> | This study |
| CA-IF013 | <i>sod4Δ</i> | SN152, <i>sod4Δ::cmLEU2/SOD4</i> | This study |
| CA-IF015 | <i>sod4Δ/Δ</i> | SN152, <i>sod4Δ::cmLEU2/sod4Δ::CdHIS1</i> | This study |
| CA-IF017 | <i>sod5Δ</i> | SN152, <i>sod5Δ::cmLEU2/SOD5</i> | This study |
| CA-IF019 | <i>sod5Δ/Δ</i> | SN152, <i>sod5Δ::cmLEU2/sod5Δ::CdHIS1</i> | This study |
| CA-IF025 | <i>sod5Δ/SOD5</i> | SN152, <i>sod5Δ::cmLEU1/sod5Δ::CdHIS1::SOD5-SAT1-</i> <i>FLP</i> | This study |
| CA-IF027 | <i>sod5Δ/SOD5</i> | SN152, <i>sod5Δ::cmLEU1/sod5Δ::CdHIS1::SOD5-FRT</i> | This study |
| CA-IF030 | <i>sod5Δ/Δ sod4Δ</i> | SN152, <i>sod5Δ::cmLEU1/sod5Δ::CdHIS1</i> <i>sod4Δ::SAT1-FLP/SOD4</i> | This study |
| CA-IF033 | <i>sod5Δ/Δ sod4Δ</i> | SN152, <i>sod5Δ::cmLEU1/sod5Δ::CdHIS1</i> <i>sod4Δ::FRT/SOD4</i> | This study |
| CA-IF036 | <i>sod5Δ/Δ</i> <i>sod4Δ/Δ</i> | SN152, <i>sod5Δ::cmLEU1/sod5Δ::CdHIS1</i> <i>sod4Δ::FRT/sod4Δ::SAT1-FLP</i> | This study |
| CA-IF039 | <i>sod4/5Δ/Δ</i> | SN152, <i>sod5Δ::cmLEU1/sod5Δ::Cd HIS1</i> <i>sod4Δ::FRT/sod4Δ::FRT</i> | This study |
| CA-IF021 | <i>sod6Δ</i> | SN152, <i>sod6Δ::cmLEU2/SOD6</i> | This study |
| CA-IF023 | <i>sod6Δ/Δ</i> | SN152, <i>sod6Δ::cmLEU1/sod6Δ::CdHIS1</i> | This study |
| CA-IF043 | <i>sod6Δ/Δ sod4Δ</i> | SN152, <i>sod6Δ::cmLEU1/sod6Δ::CdHIS1</i> <i>sod4Δ::SAT1-FLP/SOD4</i> | This study |
| CA-IF046 | <i>sod6Δ/Δ sod4Δ</i> | SN152, <i>sod6Δ::cmLEU1/sod6Δ::CdHIS1</i> <i>sod4Δ::FRT/SOD4</i> | This study |
| CA-IF049 | <i>sod6Δ/Δ</i> <i>sod4Δ/Δ</i> | SN152, <i>sod6Δ::cmLEU1/sod6Δ::CdHIS1</i> <i>sod4Δ::FRT/sod4Δ::SAT1-FLP</i> | This study |
| CA-IF051 | <i>sod4/6Δ/Δ</i> | SN152, <i>sod6Δ::cmLEU1/sod6Δ::CdHIS1</i> <i>sod4Δ::FRT/sod4Δ::FRT</i> | This study |
| CA-IF054 | <i>sod5Δ</i> | SC5314, <i>sod5Δ::SAT1-FLP/SOD5</i> | This study |
| CA-IF057 | <i>sod5Δ</i> | SC5314, <i>sod5Δ::FRT/SOD5</i> | This study |
| CA-IF060 | <i>sod5Δ/Δ</i> | SC5314, <i>sod5Δ::FRT/ sod5Δ::SAT1-FLP</i> | This study |
| CA-IF063 | <i>sod5Δ/Δ</i> | SC5314, <i>sod5Δ::FRT/sod5Δ::FRT</i> | This study |
| CA-IF067 | <i>sod5Δ/Δ</i> <i>sod4Δ/Δ sod6Δ</i> | SN152, <i>sod5Δ::cmLEU1/sod5Δ::Cd HIS1</i> <i>sod4Δ::FRT/sod4Δ::FRT sod6Δ::FRT/SOD6</i> | This study |
| CA-IF070 | <i>sod5Δ/Δ</i> <i>sod4Δ/Δ</i> <i>sod6Δ/Δ</i> | SN152, <i>sod5Δ::cmLEU1/sod5Δ::Cd HIS1</i> <i>sod4Δ::FRT/sod4Δ::FRT</i> <i>sod6Δ::FRT/sod6Δ::FRT</i> | This study |