

## **Yeast Oligonucleotide-mediated Genome Engineering (YOGÉ)**

Supplementary Data

Oligonucleotide sequences used for recombination ('\*' denote removed nucleotides from the wild-type sequence):

| <b>CAN1 Mutagenesis</b>   |  |
|---------------------------|--|
| CAN1.can1-100.90.COD      | ACACACCACAGACGTGGGTCAATACCATTGAAAGATGAG<br>AAAAGT <u>TAAGA</u> ATTGTATCCATTGCGCTCTTTCCCGACGA<br>GAGTAAATGGC  |
| CAN1.can1-100.90.NCOD     | GCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATACAA<br>TTCTT <u>AACT</u> TTTTCTCATCTTTCAATGGTATTGACCCACGT<br>CTGTGGTGTGT |
| CAN1.can1-<br>2MM.90.NCOD | GCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATACAA<br>TTCTC <u>AACT</u> TTTTCTCATCTTTCAATGGTATTGACCCACGT<br>CTGTGGTGTGT |
| CAN1.can1-<br>5MM.90.NCOD | GCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATACAA<br>TTCTC <u>ACTAT</u> TTTCTCATCTTTCAATGGTATTGACCCACGT<br>CTGTGGTGTGT |
| CAN1.can1-<br>8MM.90.NCOD | GCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATACAA<br>TCAGC <u>ACTAT</u> TTTCTCATCTTTCAATGGTATTGACCCACGT<br>CTGTGGTGTGT |
| CAN1.can1-<br>2DE.90.NCOD | TCGCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATAC<br>AATT**CTACTTTTTCTCATCTTTCAATGGTATTGACCCACG<br>TCTGTGGTGTGT        |
| CAN1.can1-<br>5DE.90.NCOD | CGCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATACA<br>ATT*****CTTTTCTCATCTTTCAATGGTATTGACCCACGTC<br>TGTGGTGTGTTTGT      |
| CAN1.can1-<br>8DE.90.NCOD | CGCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATACA<br>ATT*****TTCTCATCTTTCAATGGTATTGACCCACGTCT<br>GTGGTGTGTTTGTAA       |
| CAN1.can1-2IN.90.NCOD     | CTCGCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATA<br>CAATT <u>CCAT</u> TTTACTTTTTCTCATCTTTCAATGGTATTGACC<br>CACGTCTGTG |
| CAN1.can1-5IN.90.NCOD     | TCGCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATAC<br>AATT <u>CGGCAT</u> TTTACTTTTTCTCATCTTTCAATGGTATTGA<br>CCCACGTCTGT |
| CAN1.can1-8IN.90.NCOD     | GCCATTTACTCTCGTCGGGAAAGAGCGCAATGGATACAA<br>TT <u>CGGCATGT</u> CTTTACTTTTTCTCATCTTTCAATGGTATTG<br>ACCCACGTCTG |
|                           |  |
| <b>ade2-1 Correction</b>  |  |
| ade2.ADE2.90.NCOD         | GAACATCAACATGCTCAATCTCAATCGTTAGCACATCAC<br>ATTTTT <u>CAGCT</u> AGTTTTTTCGATATCAAGAGGATTGGAAAA<br>GGAGCCATTAA |
| ade2.ADE2.90.COD          | TTAATGGCTCCTTTTCCAATCCTCTTGATATCGAAAACT<br>AGCTGAAAAATGTGATGTGCTAACGATTGAGATTGAGCA<br>TGTTGATGTTT            |

|  |   |
|--|---|
| ade2.ADE2.15.NCOD                      | GCACATCACATTTTT <b>C</b> AGCTAGTTTTTCGA   |
| ade2.ADE2.25.NCOD                      | TCAATCGTTAGCACATCACATTTTT <b>C</b> AGCTAGTTTTTCGA<br>TATCAAGAGG   |
| ade2.ADE2.180.NCOD                     | AATTTTAAATTTGGGATGTTTTACTTGAAGATTCTTTAGTG<br>TAGGAACATCAACATGCTCAATCTCAATCGTTAGCACAT<br>CACATTTTT <b>C</b> AGCTAGTTTTTCGATATCAAGAGGATTGGA<br>AAAGGAGCCATTAACGTGGTCATTGGAGTTGCTTATTTG<br>TTTGGCAGGAGAATTTTCAGC |
|  |   |
| <b>URA3 Mutagenesis</b>                |   |
| URA3.ura3-1.45.Lag                     | CCGTGGATGATGTGGTCTCTACAGGATCTGACATTATTA<br>TTGTTGaAAGAGGACTATTTGCAAAGGGAAGGGATGCTA<br>AGGTAGAGGGTG  |
| URA3.ura3-1.45.Lead                    | CACCCTCTACCTTAGCATCCCTTCCCTTTGCAAATAGTC<br>CTCTTTCAACAATAATAATGTCAGATCCTGTAGAGACCAC<br>ATCATCCACGG  |
|  |   |
| <b>LYP1 Mutagenesis</b>                |   |
| LYP1.lyp1.TAA.90.COD                   | AAATGGGACGAGAAACAAAACAACATTGGCGAACAGAG<br>CATGCAGTAATTACCAGAAGACCAGATAGAACATGAGAT<br>GGAAGCAATAGAT  |
| LYP1.lyp1.TAA.90.NCOD                  | ATCTATTGCTTCCATCTCATGTTCTATCTGGTCTTCTGGT<br>AATTACTGCATGCTCTGTTCCGCAATGTTGTTTTGTTTCT<br>CGTCCCATTT  |
|  |   |
| <b>LEU2 mutagenesis and correction</b> |   |
| LEU2.leu2.90.COD.TAG                   | TATATATATATATTTCAAGGATATACCATTCTAATGTCTGC<br>CCCTTAGAAGATCGTCGTTTTGCCAGGTGACCACGTTGG<br>TCAAGAAATC  |
| LEU2.leu2.90.NCOD.TAG                  | GATTTCTTGACCAACGTGGTCACCTGGCAAACGACGAT<br>CTTCTAAGGGGCAGACATTAGAATGGTATATCCTTGAAA<br>TATATATATATA   |
| leu2.LEU2.90.COD.TAG                   | ATATATATATATTTCAAGGATATACCATTCTAATGTCTGC<br>CCCTAAGAAGATCGTCGTTTTGCCAGGTGACCACGTTGG<br>TCAAGAAATCA  |
| leu2.LEU2.90.NCOD.TAG                  | TGATTTCTTGACCAACGTGGTCACCTGGCAAACGACGA<br>TCTTCTTAGGGGCAGACATTAGAATGGTATATCCTTGAA<br>ATATATATATAT   |