|  |  |  |
| --- | --- | --- |
| Primer number | Primer name | Sequence (5’ to 3’) |
| 1047 | TAL1Fw1 | CTGTACACTAGGAAGCCCTGTT |
| 1858 | FK050 | CGGATGGATGTCTCAAAC |
| 2122 | BG26-DF | GCTGCAGTATTGTTCCTGAG |
| 2123 | BG26-DR | CCTGTTTGCCTTTCCTTACG |
| 2557 | FK117-MP1 | GTGGACGCTATGTTATGC |
| 2558 | FK118-MP2 | AGTCTCACCACCAAGATTC |
| 2559 | FK119-MP3 | CCAGGTCCAATCCCAATC |
| 2560 | FK120-MP4 | CAGTGTTCACCGTAAACAG |
| 2561 | FK121-MP5 | TCTGCTTTGTACGCTTCTG |
| 2562 | FK122-MP6 | CGTATTGGTCGTCGTCAG |
| 2564 | FK124-MP8 | GATGAAGAACGCTGTTCC |
| 4494 | RPE1 DG fw | TATCCAAGTCGAGCTGGGAAAG |
| 4495 | RPE1 DG rv | CCCATGAGTTAGGCACTTACG |
| 5598 | TKL1 DG fw | CGTTCCGTTCGCAATCTC |
| 5599 | TKL1 DG rv | GGTGTGATTCTCTCGAAGG |
| 5807 | DT2 | ATGTCTTCATCCAACGCC |
| 6023 | CHI knockout cassette rv | CAGTTCTCTTTGGCTAGTTTTTC |
| 8566 | FW\_zwf1\_outside | GGGTGGCGAATTCTTCAATG |
| 10335 | ConRE Rv | GGCTGTCTTGCTTAGTTGTG |
| 12220 | ABZ1\_SNO1\_THI4 REV | GTGTGGTTCATGGGTGCGTTAGTCATCGGTATGATCTGTACATG |
| 12612 | PAL1\_fw2 | CAGTTCTCTTTGGCTAGTTTTTC |
| 12614 | PAL1\_rv1 | TCGAATCTAACCGCTTCGAG |
| 12615 | PAL1\_rv2 | ACAAATCGCAACGAGGAACG |
| 13483 | ConL\_pGGK\_fw | TCTCCAGGACCATCTGAATC |
| 13668 | pGPM1 s.e dg fw | GAGGGCGGTTCTCATATTTC |
| 14788 | nadABhigh\_seq2\_fw | GCCGATAATTGCAGACGAAC |
| 17634 | TDH3p pGGKd017 fw | CTGGCCGATAATTGCAGACG |
| 17636 | CYC1t pGGKd017 rv | GATTTCCGTCTCATGCTCAG |
| 17819 | SeTPI1-At4CL3 GA fw | ACATACACTAAAAATGATCACTGCAGCTCTAC |
| 17820 | tSDH2-At4CL3 GA rv | TTTTTCTGATAGTTCAACAAAGCTTAGCTTTGAG |
| 17948 | coAtCHS3 dg fw | TATCGACGGTCACTTGAGAG |
| 17949 | coAtCHS3 dg rv | CGTGTCTAGTAGCTCTCATC |
| 17975 | coGhDFR dg rv1 | AAACCAGCAGCACCAGTAAC |
| 17976 | coGhDFR dg rv2 | CACAAGTCGTCCAAGTGAAC |
| 17977 | coGhDFR dg fw | AGTTGTGGAAGGCTGACTTG |
| 17978 | pSkTDH3 dg fw1 | CGGACATAACCTCAATGGAGTG |
| 17979 | coAtF3H dg rv1 | GTCTGGTTGTGGACACTTTG |
| 17980 | coAtF3H dg fw1 | ACGCTTGTGTTGACATGG |

## Supplementary Table 14 - List of NeoChr10 and NeoChr11 chromosome parts

\* Size of the fragments does not include the SHR sequences.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SHR 5’ | part | SHR 3’ | Size (bp)\* | Template | Primer Fw | Primer Rv |
|  | Telomere left | AO | 813 | pLM092 | 13395 | 13396 |
| AO | Chunk 7A | BJ | 2472 | *E.coli* BL21/*E.coli* XL1 Blue | 10004 | 11535 |
| BJ | Chunk 7B | BK | 2435 | *E.coli* BL21/*E.coli* XL1 Blue | 11536 | 11537 |
| BK | Chunk 7C | BL | 2478 | *E.coli* BL21/*E.coli* XL1 Blue | 11538 | 11539 |
| BL | Chunk 7D | AP | 2526 | *E.coli* BL21/*E.coli* XL1 Blue | 11540 | 10005 |
| AP | Chunk 8A | BM | 2477 | *E.coli* BL21/*E.coli* XL1 Blue | 10006 | 11541 |
| BM | Chunk 8B | BN | 2567 | *E.coli* BL21/*E.coli* XL1 Blue | 11542 | 11543 |
| BN | Chunk 8C | BO | 2454 | *E.coli* BL21/*E.coli* XL1 Blue | 11544 | 11545 |
| BO | Chunk 8D | AC | 2452 | *E.coli* BL21/*E.coli* XL1 Blue | 11546 | 10007 |
| AC | *mRuby2* | AD | 1667 | pUDC191 | 11365 | 11366 |
| AD | *ARS1* | AN | 56 | Annealing of complementary primers | 13397 | 9989 |
| AN | Chunk 18A | BP | 2525 | *E.coli* BL21/*E.coli* XL1 Blue | 13398 | 13399 |
| BP | Chunk 18B | BQ | 2510 | *E.coli* BL21/*E.coli* XL1 Blue | 13400 | 13401 |
| BQ | Chunk 19C | BR | 2495 | *E.coli* BL21/*E.coli* XL1 Blue | 13509 | 13510 |
| BR | Chunk 19D | DE | 2496 | *E.coli* BL21/*E.coli* XL1 Blue | 13511 | 13512 |
| DE | Chunk 15A | DF | 2515 | *E.coli* BL21/*E.coli* XL1 Blue | 13406 | 13407 |
| DF | Chunk 15B | DH | 2504 | *E.coli* BL21/*E.coli* XL1 Blue | 13408 | 13409 |
| DH | Chunk 15C | DI | 2489 | *E.coli* BL21/*E.coli* XL1 Blue | 13410 | 13411 |
| DI | Chunk 15D | DJ | 2497 | *E.coli* BL21/*E.coli* XL1 Blue | 13412 | 13413 |
| DJ | *CEN6/ARS4* | AE | 519 | pLM092 | 13414 | 9991 |
| AE | Chunk 16A | DK | 2520 | *E.coli* BL21/*E.coli* XL1 Blue | 13415 | 13416 |
| DK | Chunk 16B | DL | 2470 | *E.coli* BL21/*E.coli* XL1 Blue | 13417 | 13418 |
| DL | Chunk 16C | DM | 2517 | *E.coli* BL21/*E.coli* XL1 Blue | 13419 | 13420 |
| DM | Chunk 16D | DN | 2520 | *E.coli* BL21/*E.coli* XL1 Blue | 13421 | 13422 |
| DN | Chunk 17A | DO | 2499 | *E.coli* BL21/*E.coli* XL1 Blue | 13423 | 13424 |
| DO | Chunk 17B | DP | 2498 | *E.coli* BL21/*E.coli* XL1 Blue | 13425 | 13426 |
| DP | Chunk 19A | DQ | 2509 | *E.coli* BL21/*E.coli* XL1 Blue | 13427 | 13428 |
| DQ | Chunk 17D | DR | 2543 | *E.coli* BL21/*E.coli* XL1 Blue | 13429 | 13430 |
| DR | *ARS417* | BU | 60 | Annealing of complementary primers | 13431 | 11508 |
| BU | *HIS3* | AJ | 1250 | pLM092 | 11509 | 11032 |
| AJ | Chunk 4A | BC | 2526 | *E.coli* BL21/*E.coli* XL1 Blue | 9998 | 11510 |
| BC | Chunk 4B | BD | 2488 | *E.coli* BL21/*E.coli* XL1 Blue | 11511 | 11512 |
| BD | Chunk 4C | BE | 2470 | *E.coli* BL21/*E.coli* XL1 Blue | 11513 | 11514 |
| BE | Chunk 4D | AK | 2419 | *E.coli* BL21/*E.coli* XL1 Blue | 11515 | 9999 |
| AK | Chunk 9.2A | BF | 2405 | *E.coli* BL21/*E.coli* XL1 Blue | 10008 | 11516 |
| BF | Chunk 9.2B | BS | 2565 | *E.coli* BL21/*E.coli* XL1 Blue | 11517 | 11518 |
| BS | Chunk 9.2C | BT | 2487 | *E.coli* BL21/*E.coli* XL1 Blue | 11519 | 11520 |
| BT | Chunk 9.2D | AQ | 2502 | *E.coli* BL21/*E.coli* XL1 Blue | 11521 | 11522 |
| AQ | Chunk 5A | BG | 2485 | *E.coli* BL21/*E.coli* XL1 Blue | 10000 | 11523 |
| BG | Chunk 5B | BH | 2521 | *E.coli* BL21/*E.coli* XL1 Blue | 11524 | 11525 |
| BH | Chunk 5C | BI | 2513 | *E.coli* BL21/*E.coli* XL1 Blue | 11526 | 11527 |
| BI | Chunk 5D | AL | 2441 | *E.coli* BL21/*E.coli* XL1 Blue | 11528 | 10001 |
| AL | *mTurquoise2* | DS | 1683 | pUDC192 | 13432 | 13433 |
| DS | Telomerator |  | 807 | pLM092 | 13434 | 13435 / 13436 |