```
                         (((((((..(((...........))).(((((.......)))))).(((((.......
chr-3.trna8-Ser-GCT      GACGCUUUGGCCGAGUGGUU-AAGGCGUGUGCCUGCUAAGUACA-UGGGGUUU------- 51
chr-5.trna6-Ser-GCT      GUCGCUUUGGCCGAGUGGUU-AAGGCGUGCGCCUGCUAAGUACA-UGGGGUUU------- 51
chr-2.trna10-Ser-GCT     GUCGCUUUGGCCGAGUGGUU-AAGGCGUGUGCCUGCUAAGUACA-UGGGGUUU------- 51
chr-3.trna10-Ser-GCT     GUCGCUUUGGCCGAGUGGUU-AAGGCGUGUGCCUGCUAAGUACA-UGGGGUUU------- 51
chr-17.trna68-Ser-GCT    GUCGCUUUGGCCGAGUGGUU-AAGGCGUGUGCCUGCUAAGUACA-UGGGGUUU------- 51
chr-3.trna29-Ser-GCT     GUCGCUUUGGCCGAGUGGUU-AAGGCGUGUGCCUGCUAAGUACA-UGGGGUUU------- 51
chr-9.trna2-Ser-GCT      GUCGCUUUGGCCGAGUGGUU-AAGGCGUGUGCCUGCUAAGUACA-UGGGGUUU------- 51
chr-14.trna9-Ser-GCT     GUCGCUUUGGCCGAGUGGUU-AAGGCGUGUGCCUGCUAAGUACA-UGGGGUUU------- 51
chr-17.trna4-Ser-CGA     GUCGAUAUGUCCGAGUGGUU-AAGGAGACAGACUCGAAAUCUGU-UGGGCUCU------- 51
chr-12.trna6-Ser-CGA     GUCGAUAUGUCCGAGUGGUU-AAGGAGACAGACUCGAAAUCUGU-UGGGCUUU------- 51
chr-1.trna39-Ser-TGA     GUCGAUAUGUCCGAGUGGUU-AAGGAGACAGACUUGAAAUCUGU-UGGGCUUC------- 51
chr-8.trna2-Ser-TGA      GUCGAUAUGUCCGAGUGGUU-AAGGAGACAGACUUGAAAUCUGU-UGGGCUUC------- 51
chr-12.trna15-Ser-TGA    GUCGAUAUGUCCGAGUGGUU-AAGGAGACAGACUUGAAAUCUGU-UGGGCUCC------- 51
chr-10.trna27-Ser-TGA    GUCGAUAUGUCCGAGUGGUU-AAGGAGACAGACUUGAAAUCUGU-UGGGCUAC------- 51
chr-6.trna11-Ser-TGA     GUCGAUAUGUCCGAGUGGUU-AAGGAGACAGACUUGAAAUCUGU-UGGGCUUU------- 51
chr-14.trna3-Ser-AGA     GUGGACGUGCCGGAGUGGUU-AUCGGGCAUGACUAGAAAUCAUG-UGGGCUCU------- 51
chr-18.trna2-Ser-AGA     GUGAGCGUGCCGGAGUGGUU-AUCGGGCAUGACUAGAAAUCAUG-UGGGCUCU------- 51
chr-21.trna5-Ser-AGA     GUGGACGUGCCGGAGUGGUU-AUCGGGCAUGACUAGAAAUCAUG-UGGGCUCU------- 51
chr-23.trna6-Ser-AGA     GUGGACGUGCCGGAGUGGUU-AUCGGGCAUGACUAGAAAUCAUG-UGGGCUCU------- 51
chr-6.trna14-Ser-AGA     GUGGUCGUGCCGGAGUGGUU-AUCGGGCAUGACUAGAAAUCAUG-UGGGCUCU------- 51
chr-7.trna5-Ser-TGA      --CUCCAUGUCCGAGUGGUU-AAGGAGACAGACUUGAAAUCUGU-UGGACUUU------- 49
chr-1.trna48-Ser-GGA     GGAGCGGUGGCUAAGUGGUUCAAGGCGUAGCAUUGGAACUGCUAUGUAAGCUUU-U---- 55
chr-1.trna52-Ser-GGA     GGAGCGGUGGAUGAGUGGUUCAAGGCGUAGCAUUGGAACUGCUAUGUAAGCUUU-U---- 55
chr-11.trna32-Ser-GGA    GGAGAGGUGGCCGAGUGGUUCAAGGCGUAGCAUUGGAACUGCUAUGUAGGAUUU-U---- 55
chr-17.trna56-Ser-GGA    GGAGAGGUGGCCGAGUGGUUAAAGGUGUAGCAUUGGAAUUGCUAUGUAGGCUUU-U---- 55
chr-17.trna59-Ser-GGA    GGAGAGGUGGUCGAGUGGUUCAAGGCGUAGCAUUGGAACUACUAUGUAGGCUUU-U---- 55
chr-19.trna1-Ser-GCT     GGAGAGAUGGCUGAGUGGACUAAAGCGUCGGAUUGCUAAUCCGUUGUAUGAGUUAU---- 56
chr-17.trna10-Ser-ACT    GGAGAGAUGGCUAAGUGGCCUGAAGCGUCGGAUUACUAAUCCGUUGUAGGAGUUAU---- 56
chr-17.trna19-Ser-TGA    -GAGAU--GGCUGAGUGGUUGAUAGCCCCGGUCUUGAAAAUUGGUAUAGUUUUGAACAAA 57
chr-1.trna26-Ser-TGA     AGAGAGAUGGUUGAGUGGUUGAUAGCCCCGGUCUUGAAAACCGAUAUAGUUUUGAUCAAA 60
chr-1.trna20-Ser-TGA     GGAGAGAUGGCUGAGUGGUUGAUAGGCCCGGUCUUGAAAACCGGUAUAGUUUUGAACAAA 60
chr-19.trna16-Ser-TGA    GGAGAGAUGGCUAAGUGGUUGAUAGCCCCGGUCUUGAAAACCGGUAUAGUUUUGAACAAA 60
chr-11.trna16-Ser-TGA    GGAGAGAUGGCUGAGUGGUUGAUAGCCCCGGUCUUGAAAAUCGUUAUAGUUUUGAACAAA 60
chr-17.trna39-Ser-ACT    UCCUCAGUAGCUCAGUGGU--AGAGUGGUCGGCUACUAACUGAUUGG------------ 45
chr-10.trna11-Ser-GGA    GCCCUUUUAACUCAGUGGU--AGAGUAAUGUCAUGGAAAGGCGUAAG------------ 45
chr-1.trna36-Ser-TGA     G--GAAGUGGCCAAGUGGUUCAAGGCGUAGCAUUUGAACUGCUAUGUAGGCUUUU----- 53
                         .........10........20........30........40........50.........
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chr-3.trna8-Ser-GCT      --CCCCGCGAGAGUUCGAAUCUCUCAG--GCGUCG 82
chr-5.trna6-Ser-GCT      --CCCCGCGAGAGUUCGAAUCUCUCAG--GCGACG 82
chr-2.trna10-Ser-GCT     --CCCCGCGAGAGUUCGAAUCUCUCAG--GCGACG 82
chr-3.trna10-Ser-GCT     --CCCCGCGAGAGUUCGAAUCUCUCAG--GCGACG 82
chr-17.trna68-Ser-GCT    --CCCCGCGAGAGUUCGAAUCUCUCAG--GCGACG 82
chr-3.trna29-Ser-GCT     --CCCCGCGAGAGUUCGAAUCUCUCAG--GCGACG 82
chr-9.trna2-Ser-GCT      --CCCCGCGAGAGUUCGAAUCUCUCAG--GCGACG 82
chr-14.trna9-Ser-GCT     --CCCCGCGAGAGUUCGAAUCUCUCAG--GCGACG 82
chr-17.trna4-Ser-CGA     --GCCUGCGCAGGUUCGAAUCCUGCUG--UCGACG 82
chr-12.trna6-Ser-CGA     --GCCUGCGCAGGUUCGAAUCCUGCUG--UCGACG 82
chr-1.trna39-Ser-TGA     --GCCCGCGCAGGUUCGAACCCUGCUG--UCGACG 82
chr-8.trna2-Ser-TGA      --GCCCGCGCAGGUUCGAACCCUGCUG--UCGACG 82
chr-12.trna15-Ser-TGA    --GCCCGCGCAGGUUCGAACCCUGCUG--UCGACG 82
chr-10.trna27-Ser-TGA    --GCCCGCGCAGGUUCGAACCCUGCUG--UCGACG 82
chr-6.trna11-Ser-TGA     --GCCCGCGCAGGUUCGAACCCUGCUG--UCGACG 82
chr-14.trna3-Ser-AGA     --GCCCGCGCAGGUUCGAAUCCUGCCG--UUCACG 82
chr-18.trna2-Ser-AGA     --GCCCGCGCAGGUUCGAAUCCUGCCG--CUCACG 82
chr-21.trna5-Ser-AGA     --GCCCGCGCAGGUUCGAAUCCUGCCG--UUCACG 82
chr-23.trna6-Ser-AGA     --GCCCGCGCAGGUUCGAAUCCUGCCG--UUCACG 82
chr-6.trna14-Ser-AGA     --GCCCGCGCAGGUUCGAAUCCUGCCG--ACCACG 82
chr-7.trna5-Ser-TGA      --GCCCGUGUAGGUUCCAACCCUGCUU--UCGACA 80
chr-1.trna48-Ser-GGA     -GUUUACCGAGGGUUCGAAUCCCUCUC--UUUCUG 87
chr-1.trna52-Ser-GGA     -AUUUACCGAGGGUUCGAAUCCCUCUC--UUUCCG 87
chr-11.trna32-Ser-GGA    -GUUUACCGAGGGUUCGAAUCCCUCUA--UUUCCG 87
chr-17.trna56-Ser-GGA    -GUCUACCGAGGGUUCAAAUCCCUCUC--UUUCCA 87
chr-17.trna59-Ser-GGA    -GUUUACCAAGGGUUCGAAUCCCUCUC--UUUUCA 87
chr-19.trna1-Ser-GCT     -UCAUACCGAGGGUUCGAAUCCCUCUC--UUUUCG 88
chr-17.trna10-Ser-ACT    -UCGUAUCAAGGGUUCGAAUCCCUCUC--UUUUCG 88
chr-17.trna19-Ser-TGA    GAACUAUCGAGGGUUCGAAUCCCUCUA--UCUCCU 90
chr-1.trna26-Ser-TGA     GAACUAUCGAGGGUUCGAAUCCCUCUC--UCUUCU 93
chr-1.trna20-Ser-TGA     GAACUAUCGAGGGAUCGAAUCCCUCUC--UCUUCU 93
chr-19.trna16-Ser-TGA    GAACUAUCGAGGGUUCGAAUCCCUGUC--UCUCCU 93
chr-11.trna16-Ser-TGA    GAACUAUCGAGGGUUCAAAUCUCUCUC--UCUCUC 93
chr-17.trna39-Ser-ACT    ------UCGUAGGUUGGAAUCCUACUU--GGGGAG 72
chr-10.trna11-Ser-GGA    ------UCAUCAGUUCAAAUUCGAUAA--GGGGCU 72
chr-1.trna36-Ser-TGA     -AUUUACCGAGGGUUCGAAUCCCUAAGGAUGACUU 87
                         .........70........80........90....
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