```
                                 (((((((.....(.((((..((....))).))).(((((.......)))))).....(((
chr-1.trna24-Val-CAC     GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-1.trna31-Val-CAC     GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-2.trna20-Val-CAC     GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-17.trna23-Val-CAC    GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-7.trna4-Val-CAC      GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-7.trna1-Val-CAC      GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-7.trna24-Val-CAC     GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-4.trna34-Val-CAC     GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-9.trna22-Val-CAC     GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-12.trna28-Val-CAC    GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-9.trna24-Val-CAC     GUCUGGG-----UGGUGU--AGUCGGUUAUCACGCUAGUCUCACACACUAGAGGUCCCCG 53
chr-2.trna9-Val-AAC      GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-1.trna28-Val-AAC     GGUUUUG-----UGGUGU--AGUUGGUUAUCACGUUCGUCUAACACACUGAAGGUCUCCG 53
chr-1.trna15-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-2.trna12-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-3.trna9-Val-AAC      GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-4.trna36-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-4.trna42-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-16.trna9-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-15.trna24-Val-AAC    GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-14.trna27-Val-AAC    GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-13.trna12-Val-AAC    GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-12.trna29-Val-AAC    GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-7.trna15-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-7.trna16-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-7.trna28-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-11.trna10-Val-AAC    GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-6.trna30-Val-AAC     GGUUUCG-----UGGUGU--AGUUGGUUAUCACGUCAGUCUAACACACUGAAGGUCUCCG 53
chr-17.trna24-Val-TAC    GGUGCUG-----UGGUGU--AGU-GGUUAUCACGUCAGUUUACACACUGAAGGUCCCCA 52
chr-9.trna25-Val-TAC     GGUGCUG-----UGGUGU--AGU-GGUUAUCACGUCAGUUUACACACUGAAGGUCCCCA 52
chr-3.trna13-Val-TAC     GUUGCUG-----UGGUGU--AGU-GGUUAUCACGUUAGUCUUACACACUAAAGGUCUCCA 52
chr-5.trna33-Val-TAC     GUUGCUG-----UGGUGU--AGU-GGUUAUCACGUUAGUCUUACACACUAAAGGUCUCCA 52
chr-10.trna24-Val-TAC    GUUGCUG-----UGGUGU--AGU-GGUUAUCACGUUAGUCUUACACACUAAAGGUCUCCA 52
chr-11.trna12-Val-TAC    GUUGCUG-----UGGUGU--AGU-GGUUAUCACGUUAGUCUUACACACUAAAGGUCUCCA 52
chr-3.trna12-Val-TAC     GUUGCUG-----UGGUGU--AGU-GGUUAUCACGUUAGUCUUACACACUAAAGGUCCCCA 52
chr-5.trna48-Val-GAC     AGGGAUA-----UAACUC--AGC--GGUAGAGUGUCACCUUGACGUGGUGGAAGUCAUCA 51
chr-12.trna20-Val-GAC    AGGGAUA-----UAACUC--AGC--GGUAGAGUGUCACCUUGACGUGGUGGAAGUCAUCA 51
chr-11.trna27-Val-GAC    AGGGAUA-----UAACUU--AGC--GGUAGAGUGUCACCUUGACGUGGUGGAAGUCAUCA 51
chr-16.trna24-Val-CAC    GCUUGGGGAGGUUAAUGUGUAGUCGGUUAUCACGCUAGUCUCACACAUUAGGGGUC-CCG 59
chr-1.trna12-Val-CAC     GAUCGCA-----UAGCGG--AGC-GGAUAUUGCAUUAGACUCACGAUCUAAAGGUCGUGG 52
                         .........10........20........30........40........50.........

                         (........)))))))))))....).
chr-1.trna24-Val-CAC     G-UUCGAACCCGGGGCUCAGA----CA 74
chr-1.trna31-Val-CAC     G-UUCGAACCCGGGGCUCAGA----CA 74
chr-2.trna20-Val-CAC     G-UUCGAACCCGGGGCUCAGA----CA 74
chr-17.trna23-Val-CAC    G-UUCGAACCCGGGGCUCAGA----CA 74
chr-7.trna4-Val-CAC      G-UUCGAACCCGGGGCUCAGA----CA 74
chr-7.trna1-Val-CAC      G-UUCGAACCCGGGGCUCAGA----CA 74
chr-7.trna24-Val-CAC     G-UUCGAACCCGGGGCUCAGA----CA 74
chr-4.trna34-Val-CAC     G-UUCGAACCCGGGGCUCAGA----CA 74
chr-9.trna22-Val-CAC     G-UUCGAACCCGGGGCUCAGA----CA 74
chr-12.trna28-Val-CAC    G-UUCGAACCCGGGGCUCAGA----CA 74
chr-9.trna24-Val-CAC     G-UUCGAACCCGGGGCUUAGA----CA 74
chr-2.trna9-Val-AAC      GGUUCGAACCCGGGGCGAAGC----CA 75
chr-1.trna28-Val-AAC     G-UUCGAACCCGGGACGAAAC----CA 74
chr-1.trna15-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-2.trna12-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-3.trna9-Val-AAC      G-UUCGAACCCGGGGCGAAGC----CA 74
chr-4.trna36-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-4.trna42-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-16.trna9-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-15.trna24-Val-AAC    G-UUCGAACCCGGGGCGAAGC----CA 74
chr-14.trna27-Val-AAC    G-UUCGAACCCGGGGCGAAGC----CA 74
chr-13.trna12-Val-AAC    G-UUCGAACCCGGGGCGAAGC----CA 74
chr-12.trna29-Val-AAC    G-UUCGAACCCGGGGCGAAGC----CA 74
chr-7.trna15-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-7.trna16-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-7.trna28-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-11.trna10-Val-AAC    G-UUCGAACCCGGGGCGAAGC----CA 74
chr-6.trna30-Val-AAC     G-UUCGAACCCGGGGCGAAGC----CA 74
chr-17.trna24-Val-TAC    G-UUCGAUCCUGGGGCAGCAU----CA 73
chr-9.trna25-Val-TAC     G-UUCGAUCCUGGGGCAGCAU----CA 73
chr-3.trna13-Val-TAC     G-UUCGAUCCUGGGGCAGCAA----CA 73
chr-5.trna33-Val-TAC     G-UUCGAUCCUGGGGCAGCAA----CA 73
chr-10.trna24-Val-TAC    G-UUCGAUCCUGGGGCAGCAA----CA 73
chr-11.trna12-Val-TAC    G-UUCGAUCCUGGGGCAGCAA----CA 73
chr-3.trna12-Val-TAC     G-UUCGAUCCUGGGGCAGCAA----CA 73
chr-5.trna48-Val-GAC     G-UUCGAGCCUGAUUAUCCC----UA 72
chr-12.trna20-Val-GAC    G-UUCGAGCCUGAUUAUCCC----UA 72
chr-11.trna27-Val-GAC    G-UUCGAGCCUGAUUAUCCC----UA 72
chr-16.trna24-Val-CAC    G-UUCGAACUCGGGGCUCAGA----CA 80
chr-1.trna12-Val-CAC     G-UUCGAAUCCCACUGCGAUAGUUCA 77
                         .........70........80.....
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