```
                                 ((((((((((((.(((((......((....))))))))))))).........((((.....
chr-5.trna16-Val-AAC    GGUGUCAUGCUGUAGUUGGUCUAGCAUGUCAGUUUAACAUGCUGAAGAUCUUUGG--UUC 58
chr-5.trna15-Val-AAC    GGUGUUGUGGUGUAGUUGGUCUAGCACGUCAGUUUAACACGCGGAAGAUCUCCGG--UUC 58
chr-4.trna268-Val-AAC   GGUGUCGUGGUGUAGUUGGU-UAGCACAUCAGUCUAACAUGCUGAAGAUCCCCGG--UUC 57
chr-7.trna586-Val-AAC   GGUGUUGUGGUGUAGCUGGC-UAUCACAUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-7.trna56-Val-AAC    GGUGUCAUGGUGUAGCUGGC-UAUCACAUCAGUCUAACACACUGCAGGUCUCCGG--UUC 57
chr-3.trna576-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna578-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-1.trna329-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-1.trna199-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-6.trna16-Val-AAC    GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-2.trna375-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna126-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-6.trna17-Val-AAC    GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-5.trna194-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna531-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna532-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna533-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna535-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna537-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna568-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-6.trna411-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna571-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna572-Val-AAC   GGUUUUGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna577-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna575-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna359-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUU 57
chr-3.trna555-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUU 57
chr-3.trna565-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUU 57
chr-3.trna570-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-6.trna19-Val-AAC    GGUUUCGUGGUGUAGUUGGU-CAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-6.trna410-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-6.trna273-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-2.trna180-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-2.trna219-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-2.trna225-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-3.trna435-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-4.trna308-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-4.trna319-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-4.trna467-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-5.trna400-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-5.trna474-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-1.trna332-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-1.trna491-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-6.trna288-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-6.trna287-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGUUAGUCUCACACACUAAAGGUCCCCAG--UUC 57
chr-6.trna409-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUUAGUCUAACACACUGAAGGUCUCUGU--UUC 57
chr-5.trna340-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUUAGUCUAACACACUGAAGGUCUCUGU--UUC 57
chr-6.trna20-Val-AAC    GG-UUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUAAAGGUCUCCGG--UUC 56
chr-3.trna557-Val-AAC   GGUUUCGUGGUGUGGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCUGG--UUC 57
chr-3.trna567-Val-AAC   GGUUUCGUGGUGUGGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCUGG--UUC 57
chr-2.trna159-Val-AAC   GGUUUCGUGGUGUAGUUCGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGG--UUC 57
chr-3.trna158-Val-CAC   GUCUGGGUGGUGUAGUUGCU-UAUCACGUUAGUCUCACACACUAAAGGUGCCCAG--UUC 57
chr-3.trna258-Val-CAC   GUCUGGGUGGUGUAGUUGCU-UAUCACGUUAGUCUCACACACUAAAGGUGCCCAG--UUC 57
chr-3.trna426-Val-CAC   GUCUGGGUGGUGUAGUUGCU-UAUCACGUUAGUCUCACACACUAAAGGUGCCCAG--UUC 57
chr-3.trna180-Val-CAC   GUCUGGGUGGUGUAGUUGGU-UAUCACGCUAGUCUCACACACCAGUGGUCCCCAG--UAC 57
chr-1.trna305-Val-TAC   GCUGCUGUGGUGUAG-UGGU-UAUCACGUCAGUCUUACACACUGAAGGUCUCCGG--UUC 56
chr-1.trna306-Val-TAC   GCUGCUGUGGUGUAG-UGGU-UAUCACGUCAGUCUUACACACUGAAGGUCUCCAG--UUC 56
chr-3.trna235-Val-TAC   GUUGCUGUGGUGUAG-UGGU-UAUCACGUCAGUCUUACACACUGAAGGUCUCCAG--UUC 56
chr-3.trna240-Val-TAC   GUUGCUGUGGUGUAG-UGGU-UAUCACGUCAGUCUUACACACUGAAGGUCUCCAG--UUC 56
chr-2.trna413-Val-TAC   GCUGUUGUGGUGUAG-UGGU-UAUCACGUCAGUCUUACACACUGAAGGUCUCCAG--UUC 56
chr-2.trna601-Val-AAC   GGUUUUGUGGAGUAGUUGGU-UAUCAUGUCAGCCUAACACAAUGAAGGUCACCGG--UUC 57
chr-2.trna603-Val-AAC   GGUUUUGUGGAGUAGUUGGU-UAUCAUGUCAGCCUAACACAAUGAAGGUCACCGG--UUC 57
chr-3.trna573-Val-AAC   GGUUUCGUGGUGUAGUUGGU-UAUCACGUCAGUCUAACACACUGAAGGUCUCCGGUUUUU 59
chr-4.trna325-Val-GAC   AUGGAUAUAACUCAGCGG---UAGAGUGUCACCUUGACGUGGUGGAAGUCAUCAG--UUC 55
chr-6.trna285-Val-GAC   AGGGAUAUAACUCAGCGG---UAGAGUGUCACCUUGACAUGGUGGAAGUCAUCAG--UUC 55
chr-5.trna35-Val-CAC    GGGGGUGUAAGCUCAUAUGG--UAGAGCGCUUGCUUCACAUGCGAGGCAUGCGG--UUU 56
chr-7.trna379-Val-TAC   GCGUGUGUGGAUGAGCGGUGCAAUCUCUUUUGGCUUACACCCACAGUGUCAGGGGUUCAA 60
                        .........10........20........30........40........50.........
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                        ....))))))))))))).
chr-5.trna16-Val-AAC    AAAUCUAGACGAUGCUG 75
chr-5.trna15-Val-AAC    AAAUCCGGACAAUGCCA 75
chr-4.trna268-Val-AAC   AAAUCCGGUCGACAUCA 74
chr-7.trna586-Val-AAC   AAUCCCGGGCGAUGCCA 74
chr-7.trna56-Val-AAC    AAACCUGGGUGAUGCCA 74
chr-3.trna576-Val-AAC   GACCCCGGGCGAAGCCA 74
chr-3.trna578-Val-AAC   GACCCCGGGCGAAGCCA 74
chr-1.trna329-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-1.trna199-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-6.trna16-Val-AAC    GAACCCGGGCGAAGCCA 74
chr-2.trna375-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna126-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-6.trna17-Val-AAC    GAACCCGGGCGAAGCCA 74
chr-5.trna194-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna531-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna532-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna533-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna535-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna537-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna568-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-6.trna411-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna571-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna572-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna577-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna575-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna359-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna555-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna565-Val-AAC   GAACCCGGGCGAAGCCA 74
chr-3.trna570-Val-AAC   GAACCUGGGCGAAGCCA 74
chr-6.trna19-Val-AAC    AAACCCGGGCGAAGCCA 74
chr-6.trna410-Val-AAC   AAACCCGGGCGAAGCCA 74
chr-6.trna273-Val-CAC   GAACCUGGGCUCAGACU 74
chr-2.trna180-Val-CAC   GAACCUGGGCUCAGACA 74
chr-2.trna219-Val-CAC   GAACCUGGGCUCAGACA 74
chr-2.trna225-Val-CAC   GAACCUGGGCUCAGACA 74
chr-3.trna435-Val-CAC   GAACCUGGGCUCAGACA 74
chr-4.trna308-Val-CAC   GAACCUGGGCUCAGACA 74
chr-4.trna319-Val-CAC   GAACCUGGGCUCAGACA 74
chr-4.trna467-Val-CAC   GAACCUGGGCUCAGACA 74
chr-5.trna400-Val-CAC   GAACCUGGGCUCAGACA 74
chr-5.trna474-Val-CAC   GAACCUGGGCUCAGACA 74
chr-1.trna332-Val-CAC   GAACCUGGGCUUAGACA 74
chr-1.trna491-Val-CAC   GAACCUGGGCUUAGACA 74
chr-6.trna288-Val-CAC   GAACCUGGGCUUAGACA 74
chr-6.trna287-Val-CAC   GAACCUGGGCUUAGACA 74
chr-6.trna409-Val-AAC   AAACCCGGGCGAAGCCA 74
chr-5.trna340-Val-AAC   AAACCCGGGCGAAGCCA 74
chr-6.trna20-Val-AAC    GAACCCGGGCGAAGCCA 73
chr-3.trna557-Val-AAC   GAACCCGGGCGAAGCCG 74
chr-3.trna567-Val-AAC   GAACCCGGGCGAAGCCG 74
chr-2.trna159-Val-AAC   AAACCCGGGCGAAGCCA 74
chr-3.trna158-Val-CAC   GAACCUGGGCUUAGACA 74
chr-3.trna258-Val-CAC   GAACCUGGGCUUAGACA 74
chr-3.trna426-Val-CAC   GAACCUGGGCUUAGACA 74
chr-3.trna180-Val-CAC   GAACCUGGGCUCAGACA 74
chr-1.trna305-Val-TAC   GAUCCCGGGCAGCAGCA 73
chr-1.trna306-Val-TAC   GAUCCUGGGCAGCAGCA 73
chr-3.trna235-Val-TAC   GAUCCUGGGCAGCAACA 73
chr-3.trna240-Val-TAC   GAUCCUGGGCAGCAACA 73
chr-2.trna413-Val-TAC   GAUCCUGGGCAGCAGUA 73
chr-2.trna601-Val-AAC   AAUCCCGGACAAAGCUA 74
chr-2.trna603-Val-AAC   AAUCCCGGACAAAGCUA 74
chr-3.trna573-Val-AAC   UUUUCAAAAUGAAGGCA 76
chr-4.trna325-Val-GAC   GAGCCUGAUUAUCCCUA 72
chr-6.trna285-Val-GAC   GAGCCUGAUUAUCCCUA 72
chr-5.trna35-Val-CAC    GAUUCCUUGCACCUCCA 73
chr-7.trna379-Val-TAC   AUCCCCCCUCGCAC--A 75
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