**SUPPLEMENTAL REFERENCES**

Zhang, W., Cui, H., and Wong, L.-J. C. (2012). Comprehensive one-step molecular analyses of mitochondrial genome by massively parallel sequencing. *Clin. Chem.* 58, 1322–1331. doi:10.1373/clinchem.2011.181438.

**SUPPLEMENTAL TABLES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Supplemental Table 1.** Primers for mtDNA amplification | | | | |
| Primer | Fragment | Sequence | Position in mtDNAb | Product length (bp) |
| mt16426F | single amplicona | 5’-CCGCACAAGAGTGCTACTCTCCTC-3’ | 16426-16449 | 16,569 |
| mt16425R | 5’-GATATTGATTTCACGGAGGATGGTG-3’ | 16425-16401 |
| mt132F | A | 5’-CTTTGATTCCTGCCTCATCC-3’ | 132-151 | 8,531 |
| mt8662R | 5’-GGGTGGTGATTAGTCGGTTG-3’ | 8662-8643 |
| mt8467F | B | 5’CCTACCTCCCTCACCAAAGC-3’ | 8467-8486 | 8,927 |
| mt824R | 5’-ATCACTGCTGTTTCCCGTGG-3’ | 824-805 |

a(Zhang et al., 2012)

bAccording to the revised Cambridge Reference Sequence (rCRS) of mtDNA (GenBank: NC\_012920)

*F* forward, *R* reverse

|  |  |  |
| --- | --- | --- |
| Supplemental Tables 2-5. Variant loads using only variants with MutPred score >0.5 for all participants in the study | | |
| T2DM subject index | Total variant load using variants with MutPred score >0.5 | Number of variants with MutPred score >0.5 |
| D105 | 1.220 | 2 |
| D109 | 0.562 | 1 |
| D116 | 0.609 | 1 |
| D132 | 0.664 | 1 |
| D136 | 1.239 | 2 |
| D137 | 0.000 | 0 |
| D142 | 0.000 | 0 |
| D145 | 0.000 | 0 |
| D147 | 2.003 | 3 |
| D195 | 0.000 | 0 |
| D199 | 0.559 | 1 |
| D2 | 0.000 | 0 |
| D200 | 0.000 | 0 |
| D205 | 0.000 | 0 |
| D21 | 0.630 | 1 |
| D218 | 0.000 | 0 |
| D22 | 0.000 | 0 |
| D223 | 0.609 | 1 |
| D233 | 1.746 | 3 |
| D237 | 0.616 | 1 |
| D240 | 0.000 | 0 |
| D249 | 0.000 | 0 |
| D250 | 1.390 | 2 |
| D252 | 1.239 | 2 |
| D266 | 0.000 | 0 |
| D268 | 1.151 | 2 |
| D276 | 0.000 | 0 |
| D277 | 0.000 | 0 |
| D282 | 0.000 | 0 |
| D285 | 0.539 | 1 |
| D317 | 0.000 | 0 |
| D32 | 0.609 | 1 |
| D326 | 0.537 | 1 |
| D327 | 0.000 | 0 |
| D328 | 0.000 | 0 |
| D329 | 0.785 | 1 |
| D332 | 0.000 | 0 |
| D337 | 1.239 | 2 |
| D339 | 0.000 | 0 |
| D34 | 1.239 | 2 |
| D343 | 0.596 | 1 |
| D344 | 0.000 | 0 |
| D348 | 0.000 | 0 |
| D350 | 0.505 | 1 |
| D352 | 0.000 | 0 |
| D353 | 0.000 | 0 |
| D354 | 0.527 | 1 |
| D366 | 1.331 | 2 |
| D371 | 0.000 | 0 |
| D372 | 0.614 | 1 |
| D376 | 1.220 | 2 |
| D378 | 1.220 | 2 |
| D380 | 1.115 | 2 |
| D382 | 0.000 | 0 |
| D383 | 1.239 | 2 |
| D392 | 0.000 | 0 |
| D402 | 0.505 | 1 |
| D405 | 1.836 | 3 |
| D414 | 1.943 | 3 |
| D418 | 0.509 | 1 |
| D422 | 1.219 | 2 |
| D424 | 0.000 | 0 |
| D43 | 0.553 | 1 |
| D432 | 0.000 | 0 |
| D435 | 0.569 | 1 |
| D437 | 0.533 | 1 |
| D44 | 0.000 | 0 |
| D444 | 1.239 | 2 |
| D454 | 0.000 | 0 |
| D46 | 1.220 | 2 |
| D460 | 0.000 | 0 |
| D468 | 1.220 | 2 |
| D469 | 0.000 | 0 |
| D479 | 0.505 | 1 |
| D49 | 0.000 | 0 |
| D491 | 1.151 | 2 |
| D509 | 0.630 | 1 |
| D514 | 1.188 | 2 |
| D526 | 1.277 | 2 |
| D53 | 0.000 | 0 |
| D534 | 1.220 | 2 |
| D54 | 0.505 | 1 |
| D544 | 0.000 | 0 |
| D547 | 0.000 | 0 |
| D552 | 0.587 | 1 |
| D58 | 0.000 | 0 |
| D63 | 1.239 | 2 |
| D65 | 1.853 | 3 |
| D67 | 2.377 | 4 |
| D68 | 0.611 | 1 |
| D74 | 0.000 | 0 |
| D77 | 0.000 | 0 |
| D78 | 0.509 | 1 |
| D83 | 0.509 | 1 |
| D87 | 0.000 | 0 |
| D91 | 0.638 | 1 |
| D94 | 0.664 | 1 |
| O64\_21 | 1.151 | 2 |
| O64\_85 | 0.611 | 1 |
| O70\_87 | 1.955 | 3 |
| Obesity subject index | Total variant load using variants with MutPred scores >0.5 | Number of variants with MutPred scores >0.5 |
| O1\_68 | 0.000 | 0 |
| O12\_47 | 2.003 | 3 |
| O14\_43 | 0.608 | 1 |
| O17\_30 | 0.505 | 1 |
| O17\_39 | 1.187 | 2 |
| O19\_10 | 0.708 | 1 |
| O19\_65 | 0.000 | 0 |
| O2\_31 | 0.000 | 0 |
| O2\_82 | 0.509 | 1 |
| O21\_7 | 0.000 | 0 |
| O23\_84 | 0.000 | 0 |
| O23\_86 | 0.000 | 0 |
| O23\_99 | 1.239 | 2 |
| O24\_56 | 1.066 | 2 |
| O25\_100 | 1.978 | 3 |
| O25\_17 | 0.000 | 0 |
| O25\_32 | 0.000 | 0 |
| O26\_26 | 1.239 | 2 |
| O26\_86 | 0.000 | 0 |
| O28\_40 | 0.000 | 0 |
| O29\_23 | 0.000 | 0 |
| O29\_98 | 1.239 | 2 |
| O3\_59 | 0.000 | 0 |
| O3\_7 | 0.505 | 1 |
| O3\_94 | 0.000 | 0 |
| O30\_40 | 0.000 | 0 |
| O31\_88 | 1.239 | 2 |
| O32\_16 | 0.000 | 0 |
| O33\_20 | 0.000 | 0 |
| O33\_55 | 0.509 | 1 |
| O35\_31 | 0.535 | 1 |
| O35\_40 | 0.000 | 0 |
| O36\_71 | 0.000 | 0 |
| O37\_11 | 1.239 | 2 |
| O37\_44 | 0.000 | 0 |
| O37\_69 | 1.239 | 2 |
| O37\_73 | 0.609 | 1 |
| O38\_34 | 0.000 | 0 |
| O39\_27 | 0.000 | 0 |
| O39\_7 | 1.239 | 2 |
| O4\_4 | 0.000 | 0 |
| O4\_63 | 0.000 | 0 |
| O4\_83 | 1.908 | 3 |
| O40\_78 | 2.754 | 4 |
| O40\_8 | 0.609 | 1 |
| O41\_27 | 1.239 | 2 |
| O42\_62 | 0.000 | 0 |
| O42\_82 | 1.066 | 2 |
| O43\_9 | 0.000 | 0 |
| O44\_24 | 0.606 | 1 |
| O44\_37 | 0.000 | 0 |
| O44\_4 | 0.606 | 1 |
| O44\_45 | 1.733 | 3 |
| O44\_53 | 0.606 | 1 |
| O44\_99 | 0.000 | 0 |
| O45\_32 | 0.609 | 1 |
| O45\_8 | 1.220 | 2 |
| O45\_92 | 0.609 | 1 |
| O45\_93 | 1.220 | 2 |
| O48\_14 | 0.646 | 1 |
| O48\_41 | 1.836 | 3 |
| O48\_44 | 0.604 | 1 |
| O48\_8 | 0.000 | 0 |
| O49\_79 | 1.220 | 2 |
| O49\_90 | 0.000 | 0 |
| O5\_86 | 0.000 | 0 |
| O50\_69 | 1.239 | 2 |
| O53\_63 | 2.022 | 3 |
| O54\_35 | 1.116 | 2 |
| O54\_48 | 1.220 | 2 |
| O54\_50 | 0.000 | 0 |
| O55\_12 | 1.308 | 2 |
| O55\_63 | 0.000 | 0 |
| O55\_70 | 1.220 | 2 |
| O55\_75 | 1.219 | 2 |
| O55\_88 | 1.239 | 2 |
| O56\_41 | 0.606 | 1 |
| O56\_7 | 0.000 | 0 |
| O56\_82 | 0.626 | 1 |
| O57\_43 | 0.540 | 1 |
| O57\_45 | 0.505 | 1 |
| O57\_71 | 0.000 | 0 |
| O58\_44 | 0.000 | 0 |
| O58\_75 | 1.331 | 2 |
| O58\_98 | 0.000 | 0 |
| O59\_10 | 1.220 | 2 |
| O59\_20 | 1.220 | 2 |
| O59\_87 | 0.517 | 1 |
| O60\_18 | 0.000 | 0 |
| O61\_11 | 0.000 | 0 |
| O61\_39 | 0.000 | 0 |
| O61\_41 | 2.003 | 3 |
| O61\_64 | 0.000 | 0 |
| O61\_7 | 0.513 | 1 |
| O64\_1 | 1.221 | 2 |
| O64\_87 | 1.239 | 2 |
| O69\_26 | 0.000 | 0 |
| O69\_58 | 1.239 | 2 |
| O7\_11 | 0.000 | 0 |
| O8\_86 | 1.015 | 2 |
| Atherosclerosis subject index | Total variant load using variants with MutPred scores >0.5 | Number of variants with MutPred scores >0.5 |
| A1\_43 | 1.239 | 2 |
| A1\_80 | 0.630 | 1 |
| A10\_59 | 0.505 | 1 |
| A12\_57 | 0.000 | 0 |
| A12\_63 | 0.639 | 1 |
| A12\_71 | 0.000 | 0 |
| A12\_76 | 0.000 | 0 |
| A14\_74 | 0.505 | 1 |
| A14\_92 | 1.396 | 2 |
| A18\_67 | 1.239 | 2 |
| A18\_86 | 0.705 | 1 |
| A2\_20 | 2.363 | 4 |
| A2\_8 | 1.219 | 2 |
| A20\_31 | 0.649 | 1 |
| A24\_26 | 0.606 | 1 |
| A24\_67 | 0.000 | 0 |
| A24\_73 | 1.239 | 2 |
| A25\_38 | 0.509 | 1 |
| A26\_41 | 0.000 | 0 |
| A26\_47 | 0.779 | 1 |
| A27\_58 | 0.000 | 0 |
| A27\_68 | 0.609 | 1 |
| A27\_70 | 1.220 | 2 |
| A28\_47 | 1.701 | 3 |
| A28\_48 | 2.596 | 4 |
| A28\_6 | 0.540 | 1 |
| A32\_61 | 1.239 | 2 |
| A32\_67 | 0.588 | 1 |
| A32\_91 | 0.000 | 0 |
| A33\_32 | 0.000 | 0 |
| A33\_35 | 1.239 | 2 |
| A33\_59 | 1.811 | 3 |
| A33\_87 | 1.239 | 2 |
| A34\_16 | 0.000 | 0 |
| A34\_67 | 0.000 | 0 |
| A34\_79 | 1.124 | 2 |
| A35\_74 | 0.000 | 0 |
| A35\_83 | 0.505 | 1 |
| A36\_4 | 0.609 | 1 |
| A36\_91 | 0.000 | 0 |
| A38\_100 | 1.220 | 2 |
| A38\_99 | 0.000 | 0 |
| A39\_26 | 0.610 | 1 |
| A39\_64 | 1.188 | 2 |
| A4\_31 | 1.860 | 3 |
| A4\_77 | 0.610 | 1 |
| A40\_63 | 1.106 | 2 |
| A40\_95 | 0.000 | 0 |
| A42\_64 | 1.220 | 2 |
| A44\_85 | 1.270 | 2 |
| A49\_55 | 0.000 | 0 |
| A51\_63 | 0.506 | 1 |
| A52\_5 | 1.220 | 2 |
| A52\_65 | 0.000 | 0 |
| A52\_67 | 0.000 | 0 |
| A54\_12 | 1.331 | 2 |
| A55\_61 | 0.000 | 0 |
| A57\_100 | 0.000 | 0 |
| A58\_18 | 0.000 | 0 |
| A58\_4 | 1.941 | 3 |
| A59\_45 | 0.000 | 0 |
| A59\_56 | 1.156 | 2 |
| A60\_43 | 1.966 | 3 |
| A60\_7 | 0.000 | 0 |
| A64\_39 | 1.852 | 3 |
| A64\_53 | 0.000 | 0 |
| A65\_13 | 0.569 | 1 |
| A66\_3 | 0.000 | 0 |
| A66\_68 | 0.000 | 0 |
| A67\_60 | 0.505 | 1 |
| A67\_95 | 0.509 | 1 |
| A68\_62 | 0.609 | 1 |
| A70\_54 | 0.620 | 1 |
| A70\_66 | 1.797 | 3 |
| A70\_94 | 0.000 | 0 |
| A71\_38 | 1.116 | 2 |
| A71\_6 | 0.609 | 1 |
| A72\_42 | 1.239 | 2 |
| A72\_55 | 0.000 | 0 |
| A72\_9 | 0.553 | 1 |
| A73\_38 | 0.000 | 0 |
| AO12\_72 | 3.288 | 5 |
| AO26\_87 | 0.000 | 0 |
| AO30\_6 | 1.220 | 2 |
| AO35\_47 | 0.000 | 0 |
| AO41\_10 | 0.660 | 1 |
| AO43\_49 | 0.000 | 0 |
| AO43\_77 | 0.664 | 1 |
| AO44\_23 | 0.664 | 1 |
| AO48\_73 | 0.509 | 1 |
| AO56\_45 | 1.239 | 2 |
| AO57\_52 | 0.000 | 0 |
| AO58\_39 | 0.000 | 0 |
| AO62\_36 | 0.509 | 1 |
| AO62\_94 | 0.000 | 0 |
| AO63\_4 | 1.987 | 3 |
| AO65\_72 | 0.679 | 1 |
| AO66\_62 | 1.106 | 2 |
| AO71\_69 | 0.000 | 0 |
| O47\_56 | 0.587 | 1 |
| Control subject index | Total variant load using variants with MutPred scores >0.5 | Number of variants with MutPred scores >0.5 |
| K1\_56 | 0.000 | 0 |
| K12\_12 | 0.000 | 0 |
| K13\_38 | 0.551 | 1 |
| K15\_5 | 0.000 | 0 |
| K18\_72 | 0.000 | 0 |
| K20\_43 | 0.594 | 1 |
| K23\_19 | 0.000 | 0 |
| K23\_41 | 0.000 | 0 |
| K23\_81 | 0.736 | 1 |
| K23\_92 | 0.000 | 0 |
| K27\_28 | 0.000 | 0 |
| K27\_35 | 0.505 | 1 |
| K27\_67 | 2.350 | 4 |
| K27\_69 | 1.966 | 3 |
| K29\_40 | 0.000 | 0 |
| K30\_95 | 0.000 | 0 |
| K33\_45 | 0.000 | 0 |
| K34\_27 | 0.000 | 0 |
| K34\_39 | 0.000 | 0 |
| K34\_48 | 1.239 | 2 |
| K34\_77 | 0.625 | 1 |
| K35\_35 | 0.588 | 1 |
| K35\_6 | 0.000 | 0 |
| K38\_5 | 0.000 | 0 |
| K40\_48 | 1.239 | 2 |
| K42\_28 | 0.609 | 1 |
| K43\_81 | 1.239 | 2 |
| K43\_97 | 0.509 | 1 |
| K44\_39 | 0.000 | 0 |
| K45\_22 | 1.220 | 2 |
| K47\_91 | 0.000 | 0 |
| K47\_94 | 0.684 | 1 |
| K48\_39 | 0.606 | 1 |
| K48\_6 | 0.000 | 0 |
| K5\_76 | 0.509 | 1 |
| K50\_71 | 0.000 | 0 |
| K51\_7 | 0.000 | 0 |
| K52\_50 | 0.000 | 0 |
| K53\_86 | 0.000 | 0 |
| K53\_88 | 0.814 | 1 |
| K54\_33 | 1.106 | 2 |
| K54\_72 | 0.610 | 1 |
| K55\_68 | 1.116 | 2 |
| K56\_18 | 0.000 | 0 |
| K57\_42 | 0.000 | 0 |
| K58\_36 | 0.000 | 0 |
| K58\_49 | 0.000 | 0 |
| K59\_57 | 1.277 | 2 |
| K59\_61 | 1.239 | 2 |
| K59\_95 | 1.282 | 2 |
| K6\_39 | 0.000 | 0 |
| K60\_53 | 0.000 | 0 |
| K61\_10 | 0.000 | 0 |
| K61\_16 | 0.609 | 1 |
| K61\_2 | 0.596 | 1 |
| K61\_25 | 0.000 | 0 |
| K61\_29 | 1.277 | 2 |
| K61\_43 | 0.000 | 0 |
| K61\_53 | 1.239 | 2 |
| K61\_67 | 1.362 | 2 |
| K61\_90 | 0.000 | 0 |
| K61\_94 | 0.000 | 0 |
| K61\_97 | 0.676 | 1 |
| K62\_15 | 1.220 | 2 |
| K62\_57 | 0.609 | 1 |
| K62\_58 | 1.401 | 2 |
| K62\_64 | 0.735 | 1 |
| K62\_68 | 0.501 | 1 |
| K62\_79 | 1.277 | 2 |
| K62\_8 | 0.000 | 0 |
| K62\_87 | 0.000 | 0 |
| K62\_88 | 1.899 | 3 |
| K62\_96 | 0.000 | 0 |
| K63\_24 | 0.000 | 0 |
| K63\_45 | 0.505 | 1 |
| K63\_6 | 0.512 | 1 |
| K63\_79 | 2.024 | 3 |
| K64\_14 | 0.000 | 0 |
| K64\_16 | 1.840 | 3 |
| K64\_37 | 0.000 | 0 |
| K64\_44 | 0.513 | 1 |
| K64\_68 | 0.708 | 1 |
| K64\_86 | 0.000 | 0 |
| K65\_66 | 0.000 | 0 |
| K65\_76 | 0.600 | 1 |
| K65\_77 | 0.610 | 1 |
| K65\_96 | 0.000 | 0 |
| K66\_2 | 0.571 | 1 |
| K66\_57 | 0.505 | 1 |
| K67\_40 | 0.569 | 1 |
| K67\_6 | 0.000 | 0 |
| K68\_16 | 0.000 | 0 |
| K68\_25 | 0.000 | 0 |
| K68\_59 | 1.116 | 2 |
| K68\_85 | 0.000 | 0 |
| K69\_59 | 1.106 | 2 |
| K7\_78 | 0.000 | 0 |
| K7\_79 | 0.000 | 0 |
| K70\_10 | 0.000 | 0 |
| K70\_67 | 0.000 | 0 |
| K71\_10 | 0.000 | 0 |
| K71\_2 | 1.220 | 2 |
| K71\_23 | 1.240 | 2 |
| K71\_36 | 0.000 | 0 |
| K71\_7 | 0.000 | 0 |
| K71\_92 | 0.000 | 0 |
| K72\_18 | 1.299 | 2 |
| K72\_37 | 1.239 | 2 |
| K72\_46 | 1.220 | 2 |
| K72\_73 | 0.000 | 0 |
| K72\_98 | 0.540 | 1 |
| K73\_14 | 0.000 | 0 |
| K73\_21 | 0.512 | 1 |
| K8\_78 | 0.509 | 1 |
| K8\_93 | 0.000 | 0 |