**File S1. Frequencies within each *gas-1* RC line for all mtDNA positions in which a variant was identified.** Each mtDNA position for which a single-base substitution occurred in any of the 24 *gas-1* RC lines is listed by reference position in WS242 (base pair). Frequencies which appear in Table S5 are in bold. N2 = N2 G0; *gas-1* = *gas-1* G0.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **219bp** | **227bp** | **851bp** | **1977bp** | **2154bp** | **4391bp** | **5079bp** | **8057bp** | **8429bp** | **9145bp** | **10846bp** | **11734bp** |
| **N2 G0** | 0.0013 | 0.0026 | 0 | 0 | 0 | 0.9933 | **0.9846** | 0 | **0.9943** | 0.0027 | 0.0013 | 0.0043 |
| ***gas-1* G0** | 0.0014 | 0.0042 | 0.0028 | 0.0012 | 0 | 0.0012 | 0.0021 | 0 | 0 | 0 | 0 | 0 |
| **RC 1** | 0 | 0.0012 | 0 | 0 | 0.0011 | 0 | 0.0142 | 0 | 0.0008 | 0.0058 | 0 | 0.0043 |
| **RC 2** | 0.0019 | 0.0009 | 0 | 0.0017 | 0.0009 | 0.0016 | 0.0031 | 0 | 0 | 0 | 0.0008 | 0.0061 |
| **RC 3** | 0 | 0.0103 | 0 | 0.0008 | **0.9927** | 0.0008 | 0.0015 | 0 | 0 | **0.0258** | 0.0015 | 0.001 |
| **RC 4** | **0.0374** | 0.0037 | 0.0013 | 0.0032 | 0.0011 | 0.0011 | 0 | 0.001 | 0.0009 | 0.001 | 0 | 0.0025 |
| **RC 5** | 0.001 | 0.001 | 0 | **0.3707** | 0 | 0 | 0 | 0 | 0.0007 | 0.0008 | 0 | 0.0042 |
| **RC 6** | 0.0029 | 0.003 | 0.0019 | 0.0009 | 0.0009 | 0 | 0.0017 | 0.0015 | 0.0021 | 0.0024 | 0.0009 | 0.0066 |
| **RC 7** | 0.0025 | 0.0017 | 0.0027 | 0 | 0.0008 | 0 | 0 | 0.0007 | 0.0006 | 0 | 0.0022 | 0.0079 |
| **RC 8** | 0 | 0.0016 | 0.0023 | 0 | 0 | 0.0007 | 0 | 0.0008 | 0 | 0.0008 | 0 | 0.0028 |
| **RC 9** | 0 | 0 | 0.0008 | 0 | 0 | 0 | 0.0006 | 0 | 0.0006 | 0.0006 | 0.0007 | 0.0026 |
| **RC 10** | 0.0016 | 0.0008 | 0 | 0 | 0 | 0 | 0.0008 | 0 | 0 | 0.0008 | 0.0016 | 0.0035 |
| **RC 11** | 0.0007 | 0.0021 | 0 | 0.0007 | 0 | 0 | 0 | 0.0007 | 0.0019 | 0.0012 | 0.0013 | 0.006 |
| **RC 12** | 0.0042 | 0.0011 | 0.0011 | 0.0019 | 0 | 0 | 0.0038 | 0.0008 | 0 | 0.0046 | 0 | 0.0011 |
| **RC 13** | 0.0013 | **0.9956** | 0.9988 | 0 | 0 | 0 | 0.0669 | 0.0009 | 0.0016 | 0 | 0 | 0.0013 |
| **RC 14** | 0 | 0 | 0.9977 | 0 | 0 | 0 | 0 | **0.0402** | 0.0016 | 0.0036 | 0 | 0.0024 |
| **RC 15** | 0 | 0.0032 | 0.0015 | 0 | 0 | 0 | 0 | 0 | 0.001 | 0.0011 | 0.0012 | 0.0011 |
| **RC 16** | 0.002 | 0.001 | 0 | 0 | 0 | 0 | 0.0027 | 0.0014 | 0.0007 | 0.0029 | 0.0016 | 0.0063 |
| **RC 17** | 0 | 0.0019 | **0.0357** | 0 | 0 | 0.0008 | 0 | 0 | 0.0008 | 0.0023 | 0.0026 | 0.001 |
| **RC 18** | 0.0015 | **0.9925** | 0.0012 | 0 | 0 | 0 | 0 | 0 | 0.0009 | 0 | 0.001 | 0.0026 |
| **RC 19** | 0.0013 | 0 | 0.0023 | 0 | 0 | 0 | 0.0078 | 0 | 0 | 0.0008 | **0.031** | **0.0254** |
| **RC 20** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0009 | 0.0019 | 0 | 0 | 0.0095 |
| **RC 21** | 0.0009 | 0.0027 | 0.0008 | 0.0024 | 0.0009 | 0 | 0 | 0 | 0.002 | 0.0008 | 0.0017 | 0.0018 |
| **RC 22** | 0.0028 | 0.0014 | 0.0011 | **0.9978** | 0 | 0 | 0 | 0 | 0 | 0.0019 | 0.001 | 0.0034 |
| **RC 23** | 0.0012 | 0 | 0.0012 | 0.0017 | 0.001 | 0 | 0 | 0 | 0.0008 | 0.0008 | 0 | 0.0059 |
| **RC 24** | 0.0046 | **0.9963** | 0.0016 | 0 | 0 | 0.0014 | 0 | 0 | 0.0012 | 0.006 | 0 | 0.005 |