**Table S1.** List of studied materials with GenBank accession numbers for sequence records.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Taxon** | **Sample ID** | ***COI***  **haplotype** | **GenBank Accession Number** | | | | ***Wolbachia*** | | |
| ***COI*** | ***CAD*** | ***H3*** | ***CA-ATPase*** | ***16S*** | ***wsp*** | ***fts-z*** |
| *tamerlana* | Akr01 | hp3a | OP946559 | - | - | - | - | - | - |
| *tamerlana* | Akr02 | hp3a | OP946560 | - | - | - | - | - | - |
| *tamerlana* | Akr03 | hp3a | OP946561 | - | - | - | - | - | - |
| *tamerlana* | Akr04 | hp3a | OP946562 | - | - | - | - | - | - |
| *tamerlana* | CL162 | hp3a | OP946563 | - | - | - | - | - | - |
| *tamerlana* LT | 21128B07 | hp1b | OP946564 | - | - | - | - | - | - |
| *tamerlana* PLT | 20022A02 | hp1b | OP946565 | - | - | - | - | - | - |
| *mongola* | Mnt03 | hp1b | OP946566 | - | - | - | - | - | - |
| *mongola* | Mnt04 | hp3b | OP946567 | OQ192178 | OQ192144 | OQ192161 | - | - | - |
| *mongola* | CL34m | hp1c | OP946568 | OQ192179 | OQ192145 | OQ192162 | - | - | - |
| *mongola* | Mnt54 | hp1b | OP946569 | - | - | - | - | - | - |
| *mongola* | Mnt55 | hp2 | OP946570 | - | - | - | OQ155222 | OQ192116 | OQ192130 |
| *mongola* | Mnt56 | hp1b | OP946571 | - | - | - | - | - | - |
| *mongola* | Mnt57 | hp1b | OP946572 | - | - | - | - | - | - |
| *mongola* | Mnt58 | hp2 | OP946573 | - | - | - | OQ155223 | OQ192117 | OQ192131 |
| *mongola* | Mnt59 | hp3a | OP946574 | - | - | - | - | - | - |
| *mongola* | Mnt60 | hp2 | OP946575 | - | - | - | OQ155224 | OQ192118 | OQ192132 |
| *mongola* | Mnt61 | hp1b | OP946576 | - | - | - | - | - | - |
| *mongola* | Mnt62 | hp2 | OP946577 | - | - | - | OQ155225 | OQ192119 | OQ192133 |
| *mongola* | Mnt63 | hp1b | OP946578 | - | - | - | - | - | - |
| *mongola* | Mnt01 | hp2 | OP946579 | - | - | - | OQ155226 | OQ192120 | OQ192134 |
| *mongola* | Mnt02 | hp2 | OP946580 | - | - | - | OQ155227 | OQ192121 | OQ192135 |
| *mongola* | CL41m | hp2 | OP946581 | - | - | - | OQ155228 | OQ192122 | OQ192136 |
| *mongola* | Nsk16 | hp2 | OP946582 | - | - | - | - | - | - |
| *mongola* | CL39m | hp2 | OP946583 | OQ192180 | OQ192146 | OQ192163 | OQ155229 | OQ192123 | OQ192137 |
| *mongola* | CL40m | hp3a | OP946584 | OQ192181 | OQ192147 | OQ192164 | - | - | - |
| *mongola* | CL43m | hp2 | OP946585 | OQ192182 | OQ192148 | OQ192165 | OQ155230 | OQ192124 | OQ192138 |
| *mongola* | Mnt24z | hp3a | OP946586 | - | - | - | - | - | - |
| *mongola* | Mnt25z | hp4a | OP946587 | - | - | - | - | - | - |
| *mongola* | Mnt53 | hp2 | OP946588 | - | - | - | OQ155231 | OQ192125 | OQ192139 |
| *mongola ukokana* | Mnt18 | hp2 | OP946589 | OQ192183 | OQ192149 | OQ192166 | OQ155232 | OQ192126 | OQ192140 |
| *mongola ukokana* | Mnt19 | hp3c | OP946590 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt20 | hp4a | OP946591 | OQ192184 | OQ192150 | OQ192167 | - | - | - |
| *mongola ukokana* | Mnt21 | hp4a | OP946592 | OQ192185 | OQ192151 | OQ192168 | - | - | - |
| *mongola ukokana* | Mnt22 | hp4a | OP946593 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt23 | hp2 | OP946594 | - | - | - | - | - | - |
| *mongola ukokana* | Nsk014 | hp3a | OP946595 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt34z | hp3a | OP946596 | - | - | - | - | - | - |
| *mongola ukokana* PT | Nsk015 | hp4c | OP946597 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt24 | hp3a | OP946598 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt25 | hp1a | OP946599 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt26 | hp4a | OP946600 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt27 | hp3a | OP946601 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt28 | hp4a | OP946602 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt29 | hp4a | OP946603 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt30 | hp3a | OP946604 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt31 | hp3a | OP946605 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt32 | hp4a | OP946606 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt33 | hp3a | OP946607 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt34 | hp3a | OP946608 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt35 | hp4a | OP946609 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt36 | hp3a | OP946610 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt37 | hp3a | OP946611 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt38 | hp3a | OP946612 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt39 | hp3a | OP946613 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt44 | hp4a | OP946614 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt45 | hp4a | OP946615 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt46 | hp3a | OP946616 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt47 | hp3d | OP946617 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt48 | hp3a | OP946618 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt49 | hp3a | OP946619 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt50 | hp3d | OP946620 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt51 | hp3a | OP946621 | - | - | - | - | - | - |
| *mongola ukokana* | Ku01 | hp3e | OP946622 | OQ192186 | OQ192152 | OQ192169 | - | - | - |
| *mongola ukokana* | Ku02 | hp2 | OP946623 | OQ192187 | OQ192153 | OQ192170 | OQ155233 | OQ192127 | OQ192141 |
| *mongola ukokana* | Ku03 | hp4a | OP946624 | OQ192188 | OQ192154 | OQ192171 | - | - | - |
| *mongola ukokana* | Ku04 | hp4a | OP946625 | OQ192189 | OQ192155 | OQ192172 | - | - | - |
| *mongola ukokana* | Mnt28z | hp3a | OP946626 | OQ192190 | OQ192156 | OQ192173 | - | - | - |
| *mongola ukokana* | Mnt29z | hp3e | OP946627 | OQ192191 | OQ192157 | OQ192174 | - | - | - |
| *mongola ukokana* | Mnt30z | hp3d | OP946628 | OQ192192 | OQ192158 | OQ192175 | - | - | - |
| *mongola ukokana* | CL42m | hp1a | OP946629 | OQ192193 | OQ192159 | OQ192176 | - | - | - |
| *mongola ukokana* | Mnt17 | hp1a | OP946630 | OQ192194 | OQ192160 | OQ192177 | - | - | - |
| *mongola ukokana* | Mnt40 | hp2 | OP946631 | - | - | - | OQ155234 | OQ192128 | OQ192142 |
| *mongola ukokana* | Mnt41 | hp3a | OP946632 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt42 | hp3a | OP946633 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt43 | hp3a | OP946634 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt09 | hp3a | OP946635 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt10 | hp3a | OP946636 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt08 | hp3a | OP946637 | - | - | - | - | - | - |
| *mongola ukokana* | Mnt12 | hp3a | OP946638 | - | - | - | - | - | - |
| *mongola* | Mnt14 | hp2 | OP946639 | - | - | - | OQ155235 | OQ192129 | OQ192143 |
| *mongola* | Mnt15 | hp3a | OP946640 | - | - | - | - | - | - |
| *mongola* | Mnt07 | hp2 | OP946641 | - | - | - | - | - | - |
| *mongola* | CL35m | hp1b | OP946642 | - | - | - | - | - | - |
| *mongola* | CL37m | hp1b | OP946643 | - | - | - | - | - | - |
| *mongola* | CL38m | hp1a | OP946644 | - | - | - | - | - | - |
| *mongola* | CL54m | hp1b | OP946645 | - | - | - | - | - | - |
| *mongola* | CL55m | hp4a | OP946646 | - | - | - | - | - | - |
| *mongola* | CL56m | hp1b | OP946647 | - | - | - | - | - | - |
| *mongola* | CL57m | hp1b | OP946648 | - | - | - | - | - | - |
| *mongola* | Mnt26z | hp1a | OP946649 | - | - | - | - | - | - |
| *mongola* | Mnt05 | hp1b | OP946650 | - | - | - | - | - | - |
| *mongola* | Mnt06 | hp1b | OP946651 | - | - | - | - | - | - |
| *mongola* LT | 20022A03 | hp1b | OP946652 | - | - | - | - | - | - |
| *sidonia* | S1-22064B02 | hp1b | OR178498 | - | - | - | - | - | - |
| *sidonia* | S2-22064B03 | hp1b | OR178499 | - | - | - | - | - | - |
| *sidonia* | S3-22064B04 | hp1b | OR178500 | - | - | - | - | - | - |
| *sidonia* | S4-22064B05 | hp1b | OR178501 | - | - | - | - | - | - |
| *croceus* | CL151 |  | OR178497 | OR539270 | OR539252 | OR539269 | - | - | - |