**Supplementary Table 3**. Accession numbers of rDNA and *rpb1* sequences used in the phylogenetic analysis. Accession numbers of concatenated sequences are shown in the same line. When available, the information about the isolate (i), strain (s) or voucher specimen (sv) is provided beside the accession number.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species | Accession number rDNA sequence | Isolate/strain/voucher-specimen | Accession number *rpb1* sequence | Isolate/strain/voucher-specimen |
| *Claroideoglomus**claroideum* | FR750058 | "Att1063-4" (i) | HG316018 | "BEG23" (s) |
| FR750059 |  |  |
| *Claroideoglomus**drummondii* | AJ972464 | "Holotype.Blaszkowski,J.2578(DPP)" (sv) | MT733209 | “USK\_D2" (i) |
| AJ972465 | MT733210 |
| *Claroideoglomus**walkeri* | KP191489 | "G162" (i) | MT733207 | "USK\_C8" (i) |
| KP191490 | MT733208 |
| *Dominikia achra* | KJ564159 | "G146" (i) | KX784805 | "G146" (i) |
| KJ564157 | KX784807 |
| KJ564158 | KX784806 |
| *Dominikia aurea* | KM056657 | "Da" (i) | KX784792 | "Da" (i) |
| KM056659 | KX784793 |
| KM056658 |  |  |
| KM056661 |  |  |
| *Dominikia bernensis* | HG938302 | "FO310" (i) |  |  |
| HG938303 |  |  |
| HG938304 |  |  |
| *Dominikia**bonfanteae* | MW232906 | "USK\_D5" (i) | MW249067 | "USK\_D5" (i) |
| MW232910 | MW249068 |
| MW232905 |  |  |
| MW232909 |  |  |
| *Dominikia**compressa* | HG798895 | "FO352" (i) |  |  |
| HG798896 |  |  |
| HG79889 |  |  |
| HG798899 |  |  |
| *Dominikia**difficilevidera* | KR105644 | "G279" (i) | KX784795 | "G279" (i) |
| KR105645 | KX784796 |
| KR105646 | KX784797 |
| *Dominikia disticha* | KJ564147 | "G237" (i) | KX784786 | "G237" (i) |
| KJ564146 | KX784784 |
| KJ564148 | KX784787 |
| *Dominikia**duoreactiva* | KR105638 | "G271" (i) | KX784803 | "G271" (i) |
| KR105640 | KX784800 |
| KR105639 | KX784801 |
| *Dominikia**glomerocarpica* | MW507148 | field-collected sporocarps | MW541064 | field-collected sporocarps |
| MW507152 | MW541065 |
| MW507149 |  |  |
| MW507150 |  |  |
| MW507151 |  |  |
| *Dominikia indica* | KJ564166 | "G211" (i) | KX784799 | "G211" (i) |
| KJ564169 | KX784798 |
| KJ564167 |  |  |
| KJ564168 |  |  |
| *Dominikia iranica* | KJ564153 | "G187" (i) | KX784788 | "G187" (i) |
| KJ564154 | KX784790 |
| KJ564155 | KX784791 |
| KJ564156 | KX784789 |
| *Dominikia lithuanica* | KX758115 | "G331" (i) | KX784769 | "G331" (i) |
| KX758119 | KX784771 |
| KX758117 | KX784770 |
| KX758116 |  |  |
| *Dominikia minuta* | KJ564163 | "G137" (i) |  |  |
| KJ564164 |  |  |
| KJ564165 |  |  |
| *Entrophospora**infrequens* | MT722034 | “E.infrequens” (i) | MT733201 | “E.infrequens” (i) |
| MT722039 | MT733202 |
| *Epigeocarpum**crypticum* | MW507153 | field-collected sporocarps | MW541066 | field-collected sporocarps |
| MW507157 | MW541067 |
| MW507154 |  |  |
| MW507155 |  |  |
| MW507156 |  |  |
| *Funneliformis**mosseae* | FN547474 | "BEG12" (s) | JN985046 | "LPA34" (s) |
| FN547476 | JN985051 | "LPA34" (s) |
| FN547486 | JN985047 | "LPA58" (s) |
| *Funneliglomus**sanmartinensis* | MK348926 | "1a" (i) |  |  |
| MK348927 | "1b" (i) |  |  |
| MK348928 | "2a" (i) |  |  |
| *Glomus**macrocarpum* | FR750530 | "W5288" (s) | HG316006 | "Att1495-16" (i) |
| FR750526 | "W5288" (s) | HG316007 | "Att1495-16" (i) |
| FR750532 | "W5293" (s) | HG316021 | "Att1519-0" (i) |
| *Glomus**tetrastratosum* | KM056651 | “G276” (i) | MG710514 | “G276” (i) |
| KM056654 | MG710516 |
| KM056655 | MG710515 |
| *Halonatospora**pansihalos* | MH560600 | “G. pansihalos” (i) | MH560590 | “G. pansihalos” (i) |
| MH560604 | MH560591 |
| MH560601 | MH560592 |
| *Kamienskia bistrata* | KJ564135 | "G205" (i) | KX784777 | "G205" (i) |
| KJ564137 | KX784779 |
| KJ564133 | KX784778 |
| KJ564134 |  |  |
| KJ564136 |  |  |
| *Microdominikia**litorea* | MG710518 | "Dl-6" (i) | MG710511 | "G351" (i) |
| MG710520 | "Dl-B1" (i) | MG710512 |
| MG710517 | "Dl-10" (i) | MG710513 |
| MG710519 | "Dl-8" (i) |  |  |
| *Microkamienskia**divaricata* | KX758121 | "G240" (i) | KX784773 | "G240" (i) |
| KX758126 | KX784774 |
| KX758123 | KX784775 |
| *Microkamienskia**perpusilla* | KJ564139 | "G169" (i) | KX784781 | "G169" (i) |
| KJ564141 | KX784782 |
| KJ564143 | KX784783 |
| KJ564144 |  |  |
| *Microkamienskia**peruviana* | MK903006 |  |  |  |
| MK903007 |  |  |
| MK903008 |  |  |
| *Nanoglomus**plukenetiae* | MK875632 |  |  |  |
| MK875634 |  |  |  |
| MK875637 |  |  |  |
| *Oehlia diaphana* | MG836667 | DAOM227022 (s) | MG836656 | DAOM227022 (s) |
| MG836662 | DAOM745424 (s) | MG836657 | DAOM227022 (s) |
| MG836664 | DAOM227022 (s) | MG836654 | DAOM745424 (s) |
| *Orientoglomus**emiratium* | KY555052 | "G344" (i) | KY555043 | "G344" (i) |
| KY555053 | KY555044 |
| KY555051 | KY555045 |
| *Rhizoglomus**arabicum* | KF154765 | "F84" (i) |  |  |
| KF154766 |  |  |
| KF154767 |  |  |
| *Rhizoglomus**clarum* | FM865536 | "Att894-7" (i) | HG316004 | "WV235" (s) |
| FM865544 | HG316024 | "BEG142" (s) |
| *Rhizoglomus**custos* | GQ205076 | "DAOM 236361" (s) |  |  |
| *Rhizoglomus**dalpeae* | MN130951 | “G379” (i) | MW249072 | “G379” (i) |
| MN130953 | MW249073 |
| *Rhizoglomus**dunense* | KY555054 | "G232" (i) | KY555047 | "G232" (i) |
| KY555055 | KY555048 |
| *Rhizoglomus**fasciculatum* | FR750071 | "MUCL46100" (s) |  |  |
| FR750072 |  |  |
| *Rhizoglomus**intraradices* | FM865562 | "Att4-38" (i) | HG316020 | "MUCL49413" (s) |
| FM865559 | "Att4-38" (i) |  |  |
| FM865577 | "Att4-41" (i) |  |  |
| *Rhizoglomus**invermaium* | HG969378 | "Att1646" (i) |  |  |
| HG969381 |  |  |
| *Rhizoglomus**irregulare* | FM865550 | "Att1192-44" (i) | HG315983 | "LPA71-DAOM197198" (s) |
| FM865555 | HG315984 |
| *Rhizoglomus**maiae* | MN130955 | field-collected sporocarps |  |  |
| MN130956 |  |  |
| *Rhizoglomus**melanum* | HG964396 | "Dovre 6K" (i) |  |  |
| HG964397 |  |  |
| HG964398 |  |  |
| *Rhizoglomus**natalensis* | KJ210824 | "G261" (i) |  |  |
| KJ210826 |  |  |
| *Rhizoglomus**proliferum* | FM992401 | "MUCL41827" (s) | AM284981 | "DAOM226389" (s) |
| FM992398 | AM284982 |
| *Rhizoglomus**silesianum* | MN130961 | "USK\_A5" (i) | MW541062 | "USK\_A5" (i) |
| MN130958 | MW541063 |
| *Rhizoglomus**variabile* | MN384871 | "Rv2" (i) |  |  |
| MN384874 | "Rv5" (i) |  |  |
| MN384876 | "Rv7" (i) |  |  |
| *Rhizoglomus**venetianum* | LS974597 | "AT-2018" (i) |  |  |
| LS974598 |  |  |
| *Rhizoglomus**vesiculiferum* | MG836659 | "Rv” (i) |  |  |
| MG836660 |  |  |
| *Sclerocarpum**amazonicum* | MK036784MK036781MK036782MK036783 | field-collected sporocarps | MK036773 | field-collected sporocarps |
|  |  |
|  |  |
|  |  |
| *Sclerocystis**sinuosa* | AJ133706+AJ437106+FJ461846 | "MD126" (i) | HG315990 | "MD126" (i) |
| *Septoglomus**turnauae* | KF060324 | "G243" (i) | MH560597 | "G243" (i) |
| KF060327 | MH560598 |
| KF060325 | MH560599 |
| *Silvaspora**neocaledonica* | KY362437 | "rh" (i) | MW541060 | "rh" (i) |
| KY362436 | MW541061 |
| KY362438 |  |  |