**Figure 2-source data 1a. Nematode taxa used in this study, with isolation details given.** Origins of strains are coded as follows: CGC, Caenorhabditis Genetics Center; JB, Baldwin lab (U. California, Riverside); MV, Viney lab (U. Bristol); NK, Kanzaki lab; RGD, Giblin-Davis lab (U. Florida-IFAS); RS, Sommer lab; SB, Sudhaus lab (Freie Universität Berlin). For other strains, references are given. nc, not culturable.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Nematode species | Strain | Isolation source | Location | Origin |
| Diplogastridae |
| *Acrostichus* cf. *nudicapitatus* | RS5083 | Soil | Breitenholz, Germany | RS |
| *Acrostichus halicti* | JB120 | *Halictus ligatus* | Davis, CA, USA | JB |
| *Acrostichus rhynchophori* | RGD193 | *Rhynchophorus cruentatus* | Florida, USA | RGD |
| *Allodiplogaster hylobii* | RS5529 | *Hylobius abietis* | Tübingen, Germany | RS |
| *Allodiplogaster* sp. 1 | RS1982 | *Melolontha melolontha* | Usedom, Germany | RS |
| *Allodiplogaster sudhausi* | SB413 | Soil | Israel | SB |
| *Butlerius* sp. | nc | Frass from passalid beetle | New Caledonia | RS |
| *Diplogasteriana* n. sp. | RS9000 | *Nosodendron unicolor* | Nebraska, USA | RS |
| *Diplogasteriana schneideri* | RS5440 | *Nosodendron fasciculare* | Stuttgart, Germany | RS |
| *Diplogasteroides magnus* | RS1983 | *Melolontha melolontha* | Tübingen, Germany | RS |
| *Diplogasteroides* sp. | RS5444 | *Holotrichia* sp. | Kobe, Japan | RS |
| *Diplogastrellus gracilis* | SB306 | - | Sweden | SB |
| *Diplogastrellus* sp. | RS5608 | Frass from *Leptaulax* sp. | Christmas Island | RS |
| *Eudiplogasterium levidentum* | nc | Cow dung | Tübingen, Germany | RS |
| *Fictor* sp. 1 | RS9001 | *Trox* sp. | Cambodia | RS |
| *Fictor* sp. 2 | RS9002 | *Trox* sp. | Arizona, USA | RS |
| *Fictor stercorarius* | RS9003 | Dung beetle | Tübingen, Germany | RS |
| *Fuchsnema halleri* | RS5531 | *Ips typographus* | Tübingen, Germany | RS |
| *Fuchsnema* sp. | RS5537 | *Gnathotrichus materiarius* | Tübingen, Germany | RS |
| *Koerneria luziae* | RS5613 | Frass from *Dorcus ritsemae* | Indonesia | RS/NK |
| *Koerneria* sp. | RS9004 | Frass from *Dorcus rectus* | Tsukuba, Japan | RS/NK |
| *Leptojacobus dorci* | RS9005 | Frass from *Dorcus ritsemae* | Indonesia | RS/NK |
| *Levipalatum texanum* | RS5280 | *Cyclocephala* sp. | Texas, USA | RS |
| *Mehdinema alii* | nc | *Gryllodes sigillatus* | Riverside, CA, USA | RS |
| *Micoletzkya buetschlii* | RS9006 | *Ips typographus* | Tübingen, Germany | RS |
| *Micoletzkya inedia* | RS5605 | *Dendroctonus ponderosae* | Arizona, USA | RS |
| *Micoletzkya japonica* | RS5524 | *Dryocoetes uniseriatus* | Kasumigaura, Japan | RS |
| *Micoletzkya* sp. | RS5562 | *Dryocoetes autographus* | Tübingen, Germany | RS |
| *Mononchoides* sp. 1 | RS5441 | *Geotrupes* sp. | Corsica, France | RS |
| *Mononchoides* sp. 2 | RS9007 | Scarabaeidae sp. | Mexico | RS |
| *Mononchoides* sp. 3 | RS9008 | - | New Caledonia | RS |
| *Neodiplogaster crenatae* | nc | *Scolytoplatypus daimio* | Shirakami, Japan | (1) |
| *Neodiplogaster* sp. | RS9009 | Lucanidae sp. | Sulawesi | RS |
| *Oigolaimella attenuata* | SB353 | *Reticulitermes lucifugus* | Corsica, France | SB |
| *Oigolaimella* sp. | RS9010 | *Reticulitermes speratus* | Kagoshima, Japan | RS/NK |
| *Parapristionchus giblindavisi* | RS5555 | *Dorcus rubrofemoratus* | Japan | RS |
| *Parasitodiplogaster maxinema* | nc | Syconium, *Ficus maxima* | Panama | (2) |
| *Paroigolaimella micura* | nc | Cow dung | Tübingen, Germany | RS |
| *Paroigolaimella stresemanni* | nc | Cow dung | Tübingen, Germany | RS |
| *Pristionchus elegans* | RS5229 | *Phleotrupes auratus* | Japan | RS |
| *Pristionchus fissidentatus* | RS5133 | Soil | Nepal | RS |
| *Pristionchus maupasi* | RS0143 | *Melolontha melolontha* | Tübingen, Germany | RS |
| *Pristionchus pacificus* | PS312 | Soil | Pasadena, CA, USA | RS |
| *Pristionchus uniformis* | RS0141 | *Melolontha melolontha* | Menz, Germany | RS |
| *Pseudodiplogasteroides* sp. | SB257 | Rotten cacti | Arizona, USA | SB |
| *Rhabditidoides* sp. | RS5443 | *Geotrupes* sp. | Tübingen, Germany | RS |
| *Rhabditolaimus* sp. 1 | RSA134 | *Euplatypus parallelus* | La Réunion Island | RS |
| *Rhabditolaimus* sp. 2 | RS5442 | Prioninaesp*.* | Ghana | RS |
| *Sachsia zurstrasseni* | nc | Cow dung | Tübingen, Germany | RS |
| *Sudhausia aristotokia* | RS9011 | *Onthophagus* sp. | Ghana | RS |
| *Sudhausia crassa* | RS9012 | *Onthophagus* sp. | Pretoria, South Africa | RS |
| *Teratodiplogaster* sp. 1 | nc | Syconium, *Ficus variegata* | Okinawa, Japan | RS/NK |
| *Teratodiplogaster* sp. 2 | nc | Syconium, *Ficus* sp. | Vietnam | RS |
| *Tylopharynx foetida* | nc | *Geotrupes* sp. | Corsica | RS |
| Non-diplogastrid Rhabditina and outgroups |
| *Brevibucca saprophaga* | SB261 | - | - | (3) |
| *Bunonema reticulatum* | RS9013 | Moss | Tübingen, Germany | RS |
| *Bunonema* sp. | RS9014 | - | New Caledonia | RS |
| *Caenorhabditis angaria* | PS1010 | *Metamasius hemipterus* | Florida, USA | (4) |
| *Caenorhabditis briggsae* | AF16 | Soil | Ahmedabad, India | CGC |
| *Caenorhabditis elegans* | N2 | Mushroom compost | Bristol, UK | CGC |
| *Choriorhabditis cristata* | RS5618 | Basidiomycota mushroom | Tübingen, Germany | RS |
| *Cruznema tripartitum* | - | Soil | Campillo de Arenas, Spain | (5) |
| *Diploscapter* sp. | RS1965 | Compost | Tübingen, Germany | RS |
| *Distolabrellus veechi* | - | Decaying organic substrate | India | (6) |
| *Heterorhabditis bacteriophora* | - | *Heliothis punctigera* | South Australia | CGC |
| *Mesorhabditis acidophila* | - | Snottites | Tabasco, Mexico | (7) |
| *Myolaimus byersi* | RGD233 | *Hyophorbe verschaffeltii* | Florida, USA | (8) |
| *Odontopharynx longicaudata* | - | Soil | Netherlands | (9) |
| *Oscheius carolinensis* | - | Vermicompost | North Carolina, USA | (10) |
| *Oscheius guentheri* | - | Decaying rice plants | Hau Giang, Vietnam | (11) |
| *Oscheius myriophila* | RS1964 | Soil | Oahu, HI, USA | RS |
| *Oscheius tipulae* | RS1990 | - | Bogota, Colombia | RS |
| *Panagrellus redivivus* | PS1163 | - | Harpenden, UK | CGC |
| *Parasitorhabditis obtusa* | RS5586 | *Ips typographus* | Tübingen, Germany | RS |
| *Pelodera cylindrica* | RS5097 | *Geotrupes* sp. | Tübingen, Germany | RS |
| *Pelodera strongyloides* | DF5022 | Cow skin | Illinois, USA | CGC |
| *Pelodera teres* | - | Manure | Kashmir, India | (12) |
| *Pellioditis* sp. | RS5624 | Basidiomycota mushroom | Tübingen, Germany | RS |
| *Poikilolaimus floridensis* | RGD617R | *Neotermes jouteli* | Florida, USA | (13) |
| *Poikilolaimus oxycercus* | SB200 | Compost | Belgium | SB |
| *Protorhabditis* sp. | RS9015 | Frass from *Dorcus rectus* | Tsukuba, Japan | RS |
| *Rhabditis brassicae* | RS5617 | Basidiomycota mushroom | Tübingen, Germany | RS |
| *Rhabditis colombiana* | - | *Cyrtomenus bergi* | Cauca Valley, Colombia | (14) |
| *Rhabditis rainai* | - | *Coptotermes formosanus* | Louisiana, USA | (15) |
| *Rhabditoides inermis* | SB328 | - | - | SB |
| *Strongyloides ratti* | ED321 | *Rattus norvegicus* | Philadelphia, USA | MV |
| *Teratorhabditis mariannae* | RS0136 | - | Tübingen, Germany | RS |
| *Teratorhabditis palmarum* | - | *Rhynchophorus palmarum* | Trinidad | (16) |
| *Teratorhabditis synpapillata* | - | *Rhynchophorus ferrugineus* | Kagoshima, Japan | (17) |
| *Zeldia punctata* | JB15 | Soil | Riverside, CA, USA | JB |

**Supplementary references for Figure 2-source data 1:**

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**Figure 2-source data 1b. GenBank accession numbers for gene sequences analyzed in this study.** Sequences shorter than 200 bp (with accession numbers beginning with “VS”) are available at www.pristionchus.org/download/suppSusoy2014.html.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nematode species | 18s rRNA | 28S rRNA | *rpl-2* | *rpl-6* | *rpl-9* | *rpl-10* | *rpl-14* | *rpl-23* | *rpl-35* | *rps-7* | *rps-14* | *rps-27* |  | *RNAp2* |
| *Acrostichus halicti* | AB455817 | EU195983 | - | - | - | - | - | - | - | - | - | - | - | - |
| *Acrostichus* cf. *nudicapitatus* | JX163980 | KJ877318 | GQ422215 | Seq | GQ422185 | GQ422200 | GQ422323 | GQ422338 | GQ422353 | GQ422248 | GQ422278 | GQ422293 |  | - |
| *Acrostichus rhynchophori* | AB455210 | KJ877244 | KJ877294 | KJ877312 | KJ877327 | KJ877343 | KJ877359 | KJ877374 | KJ877391 | KJ877407 | KJ877424 | KJ877441 | VS0001 | - |
| *Allodiplogaster hylobii* | KJ877224 | KJ877266 | - | - | - | - | - | - | - | - | - | - | - | - |
| *Allodiplogaster* sp. 1 | JX163979 | JX163970 | EF634530 | GQ422165 | GQ422183 | EF634549 | EF634568 | EF634606 | EF634796 | GQ422246 | EF634891 | EF634986 | EF635005 | - |
| *Allodiplogaster sudhausi* | KJ877226 | KJ877267 | GQ422219 | GQ422171 | GQ422189 | GQ422204 | GQ422327 | GQ422342 | GQ422357 | GQ422252 | GQ422282 | GQ422297 |  |  |
| *Butlerius* sp. | KJ877204 | KJ877247 | - | - | - | - | - | - | - | - | - | - | - | - |
| *Diplogasteriana* sp. | KJ877202 | KJ877245 | - | - | - | - | - | - | - | - | - | - | - | - |
| *Diplogasteriana schneideri* | KJ877203 | KJ877246 | GQ422208 | GQ422157 | GQ422175 | GQ422193 | GQ422316 | GQ422331 | GQ422346 | GQ422238 | GQ422271 | GQ422286 |  | - |
| *Diplogasteroides magnus* | KJ877214 | KJ877270 | GQ422214 | GQ422166 | GQ422184 | GQ422199 | GQ422322 | GQ422337 | GQ422352 | GQ422247 | GQ422277 | GQ422292 |  | - |
| *Diplogasteroides* sp. 1 | KJ877215 | KJ877271 | GQ422209 | GQ422158 | GQ422176 | GQ422194 | GQ422317 | GQ422332 | GQ422347 | GQ422239 | GQ422272 | GQ422287 |  | - |
| *Diplogastrellus gracilis* | KJ877216 | KJ877249 | GQ422217 | GQ422169 | GQ422187 | GQ422202 | GQ422325 | GQ422340 | GQ422355 | GQ422250 | GQ422280 | GQ422295 |  | - |
| *Diplogastrellus* sp. | KJ877205 | KJ877248 | KJ877295 | KJ877313 | KJ877328 | KJ877344 | KJ877360 | KJ877375 | KJ877392 | KJ877408 | KJ877425 | KJ877442 | VS0002 | - |
| *Eudiplogasterium levidentum* | KJ877206 | KJ877258 | - | - | - | - | - | - | - | - | - | - | - | - |
| *Fictor* sp. 1 | KJ877233 | KJ877280 | KJ877288 | KJ877304 | KJ877321 | KJ877337 | KJ877353 | KJ877368 | KJ877384 | KJ877400 | KJ877418 | KJ877434 | VS0003 | - |
| *Fictor* sp. 2 | KJ877234 | KJ877281 | KJ877289 | KJ877306 | KJ877322 | KJ877338 | KJ877354 | KJ877369 | KJ877385 | KJ877401 | KJ877419 | KJ877435 | VS0004 | - |
| *Fictor stercorarius* | KJ877235 | KJ877282 | KJ877290 | KJ877308 | KJ877323 | KJ877339 | KJ877356 | KJ877370 | KJ877387 | KJ877403 | - | KJ877437 | VS0005 | - |
| *Fuchsnema halleri* | KJ877227 | KJ877253 | KJ877292 | KJ877310 | KJ877325 | KJ877341 | KJ877357 | KJ877372 | KJ877389 | KJ877405 | KJ877422 | KJ877439 | VS0006 | - |
| *Fuchsnema* sp. | KJ877228 | KJ877254 | KJ877299 | KJ877316 | KJ877332 | KJ877348 | KJ877364 | KJ877379 | KJ877395 | KJ877412 | KJ877429 | KJ877445 | VS0007 | - |
| *Koerneria luziae* | AB597232 | KJ877284 | KJ877291 | KJ877309 | KJ877324 | KJ877340 | - | KJ877371 | KJ877388 | KJ877404 | KJ877421 | KJ877438 | VS0008 | - |