**Supplementary Table 1.** Accession numbers for mitochondrial cytochrome *c* oxidase subunit 1 and nuclear 18S ribosomal DNA sequences from various apicomplexan parasites used in this study; where known, the strain or isolate associated with each sequence is identified. Sequences that were newly generated for this study are in bold typeface; additional publicly available sequences were obtained from GenBank.

| **PARASITE NAMES** | **18S rDNA SEQUENCE****ACCESSION NUMBERS (Strain/Isolate)** | **COI SEQUENCE****ACCESSION NUMBERS (Strain/Isolate)** |
| --- | --- | --- |
| *Hepatocystis* sp. | EU400394 (MFRC11) | EU254570 (MB6) |
| *Plasmodium falciparum* | M19172 | M76611 |
| *Plasmodium juxtanucleare* | AF463507 | AB250415 |
| *Plasmodium malariae* | AB489196 (Oumu) | AB489193(Oumu)  |
| *Plasmodium vivax* | JQ627158 (SV6) | AY791687 (PV02107b) |
| *Babesia bigemina* | AY603402 (Kunming)  | JQ518300 (Kunming)  |
| *Babesia bovis* | HQ264112 (USDA IA) | NC\_009902 (T2Bo) |
| *Babesia caballi* | AY309955 (Spain-1) | AB499086 |
| *Babesia rodhaini* | AB049999 | AB624357 (Australian) |
| *Theileria annulata* | KF559356 (Sanmenxia) | JQ518291 (Sanmenxia) |
| *Theileria parva* | HQ895972 (B15e) | AB499089 (Muguga) |
| *Sarcocystis alces* | KF831274 (AaC2.2) | KF831245 (AaC2.2) |
| *Sarcocystis alceslatrans* | KF831276 (AaC1.21) | KF831251(AaC1.21) |
| *Sarcocystis cruzi* | KC209740 (B4.21) | KC209600 (B4.21) |
| *Sarcocystis grueneri* | EF056010 (Sg 1RtN) | KC209617 (Rt31.4) |
| *Sarcocystis gigantea* | KC209733 (S1.1) | KC209601 (S1.1) |
| *Sarcocystis hjorti* | KF831294(Aa36.6) | KF241353 (Aa36.6) |
| ***Sarcocystis neurona*** | **KF854255 (BR2012**/**TWC2013)** | **KF854272 (BR2012**/**TWC2013)** |
| **KT184371 (MEO2015)** | None |
| *Sarcocystis rangi* | EF056011 (Sr 1RtN) | KC209668 (Rt212.22) |
| *Sarcocystis rangiferi* | EF056016 (Srf2RtN) | KC209674 (Rt131.22) |
| ***Sarcocystis rileyi*** | HM185742 (Europe) | None |
| GU120092  | **KT184389 (MEO2015**–**08131)** |
| *Sarcocystis silva* | JN226122 (Cc11.4) | KC209687 (Cc11.4) |
| *Sarcocystis sinensis* | KC209744 (B4.9) | KC209694 (B4.9) |
| *Sarcocystis taeniata* | KF831277 (AaC1.7) | KF831256 (AaC1.7) |
| *Sarcocystis tarandi* | GQ250969(St3RtN) | KC209701(Rt126.4) |
| *Sarcocystis tarandivulpes* | EF467656 (Stv1RtI) | KC209715 (Rt35.22) |
| *Sarcocystis tenella* | KC209737 (S9.1) | KC209731 (S9.1) |
| ***Cystoisospora canis*** | **KT184368(MEO2015a**) **Milly C5** | **KT184385 (MEO2015) Milly** |
| **KT184363(MEO2015b**) **Milly C6** |
| **KT184361(MEO2015c**) **Milly C7** |
| **KT184360(MEO2015d**) **Milly C11** |
| **KT184362(MEO2015e**) **Milly C17** |
| *Cystoisospora sp.* | AB519675 (2-MM) | None |
| ***Cystoisospora felis*** | L76471 | None |
| None | **KF854256 (MEO2010-CF1)** |
| None | **KF854257 (MEO2010-CF2)** |
| None | **KF854258 (MEO2010-CF3)** |
| None | **KF854259 (MEO2010-CF4)** |
| **KT184364 (MEO2015)** | **KT184386 (MEO2015)** |
| ***Cystoisospora* cf *ohioensis*** | **KT184365 (MEO2015b)** | **KF854261 (MEO2010-CO2)** |
| AY618555 | None |
| **KT184359 (MEO2015a)** | **KT184384 (MEO2015a)** |
| None | **KF854260 (MEO2010-CO1)** |
| **KT184366 (MEO2015c)** | None |
| ***Cystoisospora rivolta*** | **KT184367 (MEO2015)** | **KT184383 (MEO2015)** |
| *Isospora sp* Harbin/01/08 | FJ357797 | None |
| ***Cystoisospora suis*** | **KF854251 (MEO2010-CS1)** | **KF854262 (MEO2010-CS1)** |
| **KF854252 (MEO2010-CS2)** | **KF854263 (MEO2010-CS2)** |
| None | **KF854264 (MEO2013-CS3)** |
| None | **KF854265 (MEO2013-CS4)** |
| *Hyaloklossia lieberkuehni* | AF298623 | None |
| *Besnoitia besnoiti* | AY833646 | None |
| *Nephroisospora eptesici* | EU334134 (MN-2007) | KU215383 |
| *Neospora caninum* | L24380 (NC–1) | HM771688 (NC1) |
| AJ271354 (NC–PV1) | JX473252 (NC–Liverpool) |
| ***Hammondia hammondi*** | **KF854253 (H.H**–**20)** | **KF854267 (H.H**–**20)** |
| **KT184369 (H.H**–**20)** | **KT184387 (H.H**–**20)** |
| AF096498 (H.H–34) | None |

| ***Hammondia triffittae*** | GQ984222 (HtRtVulpes–1981–N) | JX473247 (HtRtVulpes–1981) |
| --- | --- | --- |
| ***Hammondia heydorni*** | JX220987 (clone 5) Baron | **KF854271 (MEO2010-H1) Baron** |
| JX220986 (clone 3) Baron | **KF854271 (MEO2010-H1) Baron** |
| GQ984224 (HhCanis–2000–1–N) | JX473250(HhCanis–2000) |
| **KT184370 (MEO2015) Braun** | **KT184388 (MEO2015) Braun** |
| None | **KF854268 (MEO2010-HH1)** |
| None | **KF854269 (MEO2010-HH2)** |
| None | **KF854270 (MEO2010-HH3)**  |
| ***Toxoplasma gondii*** | None | HM771689 (GT1) |
| None | **KF854273 (CTG)** |
| None | **KF854274 (GT1)** |
| None | **KF854275 (MAS)** |
| None | **KF854276 (PTG)** |
| None | **KF854277 (TgCatBr5)** |
| None | **KF854278 (TgCatBr64)** |
| None | **KF854279 (TgCgCal)** |
| None | **KF854280 (TgToucan)** |
| L37415 (ME49) | HM771690 (ME49) |
| EF472967 (RH) | None |
| L24381 (RH Australian) | None |
| M97703 (RH) | None |
| *Eimeria acervulina* | DQ136187 (Shanghai) | None |
| U67115 (Attenuated H&C) | None |
| KT184333 (NC3) | HM771673 (NC3) |
| U67116.1(Attenuated VA) | None |
| *Eimeria brunetti*  | KT184337 (Guelph 80) | HM771675 (Guelph 80) |
| *Eimeria maxima* | U67117 (Mx10) | None |
| KT184345 (Guelph 74) | HM771685 (Guelph 74) |
| KT184346 (M6) | HM771684 (M6) |
| *Eimeria praecox* | FJ236370 (Clone 70-35) | None |
| KT184351 (Guelph\_2012) | JQ659301 (Guelph\_2010) |
| KT184352 (Guelph\_2012) | KT184378 (Guelph\_2012) |
| *Eimeria mitis* | FR775307 (Type 3) | FJ236433 (Clone 60-16) |
| FR775302 (Type 1) | FR796699 |
| U67118 (FS 50) | KF501573 (USDA 50) |
| *Eimeria necatrix* | KT184349 (Guelph 84) | HM771680 (Guelph 84) |
| *Eimeria tenella* | KT184354 (USDA 80) | HM771676 (USDA 80) |
| U67121(Attenuated Penn State) | None |
| EF210325 (Shanghai) | None |
| *Eimeria adenoeides* | KC305180 (Line 5) | KC346359 (Line 5) |
| KC305176 (Line 4) | KC346358 (Line 4) |
| FR745914 (KCH) | FR846202 (KCH ) |
| *Eimeria meleagrimitis* | KC305196 (Line 5) | KC346353 (Line 5) |
| KC305191 (Line 4) | KC346352 (Line 4) |
| *Eimeria falciformis* | AF080614 | HM771682.1(Chob2) |
| KT184339 (Chob2A) | HM771682.1(Chob2) |
| KT184340 (Chob2B) | HM771682.1(Chob2) |
| *Eimeria zuernii* | AB769656 (1-2) | HM771687 (Guelph 2007) |
| KT184356 (Guelph 2007) | HM771687 (Guelph 2007) |
| *Eimeria trichosuri* | FJ829323 (Clone I) | JN192136 (Marco) |
| *Cyclospora cayetanensis* | AF111183 (Guatemala and Haiti) | KP658101 (Cyclo-CDC-2013) |
| *Caryospora bigenetica* | KT184331 (MEO2015a) | KF859856 (JB-2013) |
| KT184332 (MEO2015b) | KP658102 (MTZ–07–12108) |
| AF060975 (Clone 1) | None |
| AF060976 (Clone 2) | None |
| *Isospora gryphoni* | AF080613 | None |
| KF854254 (UWO–2010) | KC346355 (UWO-2010) |
| *Isospora greineri* | KF648870 (MTZ1) | KF648868 (MTZ1) |
| *Isospora superbusi* | KF648871 (MTZ2) | KF648869 (MTZ2) |
| *Isospora sp.*ex. *S. canaria* | None | KC346356 (JRB–2013) |
| KT184357 (AHL\_G09-038458) | KP658103 (AHL\_G09-038458) |