|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 1. DNA sequences used for phylogenetic analyses in this study** | | | | | | | | | | | |
|  |  | **GenBank Accession no.** | | **Species name** | | **Sample ID (Isolate name\_ Clone name)** | | **Host species** | **Locality** | | **Date of collection (Reference when date of collection unavailable)** |
| **1. 18S rDNA sequnces** | | | | | | | | | | | |
|  | **1.1. Newly obtained in the present study** | | | | | | | | | | |
|  |  | **LC618030** | *T. theileri* | | | | YMG-11 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  |  |  |  | | | | YMG-14 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  |  |  |  | | | | YMG-15 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  |  | **LC618031** | *T. theileri* | | | | OSK-16 | *Bos taurus* | Japan: Miyazaki | | 2015.08.10 |
|  |  |  |  | | | | OSK-120 | *Bos taurus* | Japan: Shimane-Hiroshima | | 2015.08.25 |
|  |  |  |  | | | | OSK-148 | *Bos taurus* | Japan: Miyazaki-Saga | | 2015.08.31 |
|  |  |  |  | | | | OSK-150 | *Bos taurus* | Japan: Nagasaki-Saga | | 2015.08.31 |
|  |  |  |  | | | | OSK-155 | *Bos taurus* | Japan: Miyazaki-Nagano | | 2015.08.31 |
|  |  |  |  | | | | OSK-172 | *Bos taurus* | Japan: Kagoshima-Kumamoto | | 2015.08.31 |
|  |  | **LC618032** | *T. theileri* | | | | KSM-941\_c7, c9, c10 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.11 |
|  |  |  |  | | | | KSM-946\_c2, c4, c5 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.11 |
|  |  | **LC618033** | *T. theileri* | | | | TNB-872\_c5, c7, c8 | *Cervus nippon aplodontus* | Japan: Tanabe, Wakayama | | 2008.11.19 |
|  |  |  |  | | | | KSM-944\_c1, c4 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.11 |
|  |  | **LC618034** | *T. theileri* | | | | TNB-872\_c1, c2 | *Cervus nippon aplodontus* | Japan: Tanabe, Wakayama | | 2008.11.19 |
|  |  | **LC618035** | *T. theileri* | | | | KSM-944\_c1, c2, c3 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.11 |
|  |  |  |  | | | | TNB-872\_c4, c6 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.11 |
|  |  |  |  | | | | KSM-946\_c1 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.11 |
|  |  |  |  | | | | KSM-948\_c1, c2, c3 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.12 |
|  |  |  |  | | | | KSM-949\_c2, c3 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.12 |
|  |  | **LC618036** | *T. theileri* | | | | KSM-948\_c2 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.12 |
|  |  |  |  | | | | KSM-950 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.12 |
|  | **1.2. Retrieved from the GenBank** | | | | | | | | | | |
|  |  | **AB007814** | *T. theileri* | | | | KM | *Bos taurus* | Japan: Toyama | | Urakawa & Kodama (1997) |
|  |  | **AB569248** | *Trypanosoma* sp. | | | | TSD1 | *Cervus nippon yesoensis* | Japan: Hokkaido | | 2004.08 |
|  |  | **AB569249** | *T. theileri* | | | | Esashi\_9 | *Bos taurus* | Japan: Hokkaido | | Hatama et al. (2007) |
|  |  | **AB569250** | *T. theileri* | | | | Esashi\_12 | *Bos taurus* | Japan: Hokkaido | | Hatama et al. (2007) |
|  |  | **AJ009163** | *T. theileri* | | | | TREU\_124 | *Bos taurus* | Scotland | | CTVM (1965) |
|  |  | **AJ009164** | *T. theileri* | | | | K127 | *Bos taurus* | Germany | | Bose et al. (1993) |
|  |  | **AJ009165** | *Trypanosoma* sp. | | | | D30 | *Cervus dama* | Germany | | Bose et al. (1993) |
|  |  | **AY773689** | *T. theileri* | | | | Tthc5 | *Bos taurus* | Brazil: Dourados, Mato Grosso do Sul | | Rodrigues et al. (2006) |
|  |  | **AY773692** | *T. theileri* | | | | Tthc14 | *Bos taurus* | Brazil: Miranda, Mato Grosso do Sul | | Rodrigues et al. (2006) |
|  |  | **FM202489** | *T. theileri* | | | | *–* | *Tragelaphus\_spekei* | Cameroon | | Hamilton et al. (2009) |
|  |  | **FM202490** | *T. theileri* | | | | 1 | *Cephalophus monticola* | Cameroon | | Hamilton et al. (2009) |
|  |  | **FM202491** | *T. theileri* | | | | *2* | *Cephalophus monticola* | Cameroon | | Hamilton et al. (2009) |
|  |  | **FN666409** | *T. melophagium* | | | | St Kilda | *Melophagus ovinus* | UK: St Kilda | | Gibson et al. (2010) |
|  |  | **GQ176155** | *T. theileri* | | | | Tthc28 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ176157** | *T. theileri* | | | | Tthc30 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **HQ664909** | *T. theileri* | | | | TthcV2 | *Bos taurus* | Venezuela: El Baúl, Cojedes | | Garcia et al. (2011) |
|  |  | **HQ664912** | *T. melophagium* | | | | TmHR1 | *Melophagus ovinus* | Croatia: Goljak, Zagreb | | Garcia et al. (2011) |
|  |  | **JN798594** | *Trypanosoma* sp. | | | | ACR-2011\_TC2 | *Cervus elaphus* | Croatia | | Martinković et al. (2012) |
|  |  | **JX178162** | *T. theileri* | | | | Cow-2095\_Cl-8 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178163** | *T. theileri* | | | | Cow-2095\_Cl-9 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178164** | *T. theileri* | | | | Cow-2\_Cl-4 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178165** | *T. theileri* | | | | Cow-2\_Cl-7 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178166** | *T. theileri* | | | | Cow-2\_Cl-10 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178167** | *T. theileri* | | | | Cow-3535\_Cl-3 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178168** | *T. theileri* | | | | Cow-3535\_Cl-6 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178169** | *T*. cf. *cervi* | | | | WTD-NL15\_Cl-1 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2010.07. |
|  |  | **JX178170** | *T*. cf. *cervi* | | | | WTD-NL15\_Cl-6 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2010.07. |
|  |  | **JX178171** | *T*. cf. *cervi* | | | | WTD-NL15\_Cl-9 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2010.07. |
|  |  | **JX178172** | *Trypanosoma* sp. | | | | WTD-A3\_Cl-9.1 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178174** | *T*. cf. *cervi* | | | | WTD-A21\_Cl-4 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178175** | *T*. cf. *cervi* | | | | WTD-A21\_Cl-5 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178176** | *T*. cf. *cervi* | | | | WTD-A21\_Cl-6 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178177** | *Trypanosoma* sp. | | | | Elk-142\_Cl-9 | *Cervus canadensis* | USA: Minnesota | | Fisher et al. (2013) |
|  |  | **JX178178** | *Trypanosoma* sp. | | | | Elk-142\_Cl-10 | *Cervus canadensis* | USA: Minnesota | | Fisher et al. (2013) |
|  |  | **JX178179** | *T*. cf. *cervi* | | | | Elk-416\_Cl-8 | *Cervus canadensis* | USA: Minnesota | | Fisher et al. (2013) |
|  |  | **JX178180** | *T*. cf. *cervi* | | | | Elk-328\_Cl-3 | *Cervus canadensis* | USA: Minnesota | | Fisher et al. (2013) |
|  |  | **JX178181** | *T. theileri* | | | | Cow-2073\_Cl-7 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178183** | *T. theileri* | | | | Cow-139\_Cl-9 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178184** | *T. theileri* | | | | Cow-139\_Cl-10 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178185** | *T. theileri* | | | | Cow-139\_Cl-11 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178186** | *T. theileri* | | | | Cow-133\_Cl-1 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178187** | *T. theileri* | | | | Cow-104\_Cl-1 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178188** | *T. theileri* | | | | Cow-104\_Cl-2 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178192** | *T*. cf. *cervi* | | | | WTD-A1\_Cl-1 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178193** | *T*. cf. *cervi* | | | | WTD-A1\_Cl-4 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178194** | *T*. cf. *cervi* | | | | WTD-A21\_Cl-4 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178195** | *T*. cf. *cervi* | | | | WTD-A21\_Cl-6 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178196** | *T*. cf. *cervi* | | | | WTD-A5\_Cl-1 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178197** | *T*. cf. *cervi* | | | | WTD148\_Cl-4 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.02. |
|  |  | **JX853182** | *T*. cf. *cervi* | | | | WTD-A1\_6 | *Odocoileus virginianus* | USA | | Fisher et al. (2013) |
|  |  | **JX853184** | *Trypanosoma* sp. | | | | Elk-421\_2 | *Cervus canadensis* | USA | | Fisher et al. (2013) |
|  |  | **JX853185** | *T. theileri* | | | | Cow-2095\_4 | *Bos taurus* | USA | | Fisher et al. (2013) |
|  |  | **KF765799** | *T. theileri* | | | | Bb813 | *Bison bonasus bonasus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KF765800** | *T. theileri* | | | | Bb845 | *Bison bonasus bonasus* | Poland | | Werszko, Karbowiak, Laskowski & Pyziel (unpublished in 2013) |
|  |  | **KF765801** | *T. theileri* | | | | Bb756 | *Bison bonasus bonasus* | Poland | | Werszko, Karbowiak, Laskowski & Sytykiewicz (unpublished in 2013) |
|  |  | **KF765802** | *T. theileri* | | | | Bb816 | *Bison bonasus bonasus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KF924254** | *T. theileri* | | | | Bb812 | *Bison bonasus bonasus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KF924255** | *T. theileri* | | | | Bb821 | *Bison bonasus bonasus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KF924256** | *T. theileri* | | | | Bt7201Hka | *Bos taurus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KF924257** | *T. theileri* | | | | Bt14ZA | *Bos taurus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KJ195879** | *T. theileri* | | | | Cn1 | *Cervus nippon holturolum* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KJ195884** | *T*. *cervi* | | | | DdP287 | *Dama dama* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KJ195885** | *Trypanosoma* sp. | | | | DdP18 | *Dama dama* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KJ397590** | *Trypanosoma* sp. | | | | Ce134 | *Cervus elaphus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KJ397591** | *T. theileri* | | | | Bb823 | *Bison bonasus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KJ397592** | *T. theileri* | | | | Bb871 | *Bison bonasus* | Poland | | Werszko, Karbowiak & Laskowski (unpublished in 2013) |
|  |  | **KR024688** | *T. theileri* | | | | G24 | *Glossina fuscipes fuscipes* | Central African Republic | | 2012.09. |
|  |  | **KU587631** | *T. theileri* | | | | CBT-38 | *Bos taurus* | Brazil: São Paulo | | Pacheco & Marcili (unpublished in 2016) |
|  |  | **KU587641** | *T. theileri* | | | | CBT-115 | *Bos taurus* | Brazil: Ji-Paraná, Rondônia | | 2012–2013 |
|  |  | **KU587643** | *T. theileri* | | | | CBT-120 | *Bos taurus* | Brazil: Ji-Paraná, Rondônia | | 2012–2013 |
|  |  | **KU587646** | *T. theileri* | | | | CBT-123 | *Bos taurus* | Brazil: Ji-Paraná, Rondônia | | 2012–2013 |
|  |  | **KY681802** | *Trypanosoma* sp. | | | | 2016/SF5 | *Phlebotomus perfiliewi* | Italy: Emilia-Romagna, Bologna | | 2016.07.27/28. |
|  |  | **MN752212** | *T. trinaperronei* | | | | WTD-2268 | *Odocoileus virginianus* | Venezuela: Simón Bolíar, Anzoátegui | | 2012.02. |
|  |  |  |  | | | |  |  |  | |  |
| **2. ITS1 sequnces** | | | | | | | | | | | |
|  | **2.1. Newly obtained in the present study** | | | | | | | | | | |
|  |  | **LC618030** | *T. theileri* | | | | YMG-11 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  |  |  |  | | | | YMG-14 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  |  |  |  | | | | YMG-15 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  |  | **LC618031** | *T. theileri* | | | | OSK-16 | *Bos taurus* | Japan: Miyazaki | | 2015.08.10 |
|  |  |  |  | | | | OSK-120 | *Bos taurus* | Japan: Shimane-Hiroshima | | 2015.08.25 |
|  |  |  |  | | | | OSK-148 | *Bos taurus* | Japan: Miyazaki-Saga | | 2015.08.31 |
|  |  |  |  | | | | OSK-150 | *Bos taurus* | Japan: Nagasaki-Saga | | 2015.08.31 |
|  |  |  |  | | | | OSK-155 | *Bos taurus* | Japan: Miyazaki-Nagano | | 2015.08.31 |
|  |  |  |  | | | | OSK-172 | *Bos taurus* | Japan: Kagoshima-Kumamoto | | 2015.08.31 |
|  |  | **LC618032** | *T. theileri* | | | | KSM-941\_c7, c9, c10 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.11 |
|  |  |  |  | | | | KSM-946\_c2, c4, c5 | *Cervus nippon aplodontus* | Japan: Kushimoto, Wakayama | | 2009.10.11 |
|  | **2.2. Retrieved from the GenBank** | | | | | | | | | | |
|  |  | **AB007814** | *T. theileri* | | | | KM | *Bos taurus* | Japan: Toyama | | Urakawa & Kodama (1997) |
|  |  | **AB569248** | *Trypanosoma* sp. | | | | TSD1 | *Cervus nippon yesoensis* | Japan: Hokkaido | | 2004.08 |
|  |  | **AB569249** | *T. theileri* | | | | Esashi\_9 | *Bos taurus* | Japan: Hokkaido | | Hatama et al. (2007) |
|  |  | **AB569250** | *T. theileri* | | | | Esashi\_12 | *Bos taurus* | Japan: Hokkaido | | Hatama et al. (2007) |
|  |  | **AY773698** | *T. theileri* | | | | Tthc3 | *Bos taurus* | Brazil: Eldorado, São Paulo | | Rodrigues et al. (2006) |
|  |  | **AY773699** | *T. theileri* | | | | Tthb6 (?) | *Bos taurus* (?) | Brazil: Eldorado, São Paulo (?) | | Rodrigues et al. (2006) |
|  |  | **AY773700** | *T. theileri* | | | | ATCC-30017\_TthATCC | *Bos taurus* | USA: Pennsylvania | | Rodrigues et al. (2006) |
|  |  | **AY773701** | *T. theileri* | | | | Tthb4 | *Bubalus bubalis* | Brazil: Registro, São Paulo | | Rodrigues et al. (2006) |
|  |  | **AY773702** | *T. theileri* | | | | Tthb12 | *Bubalus bubalis* | Brazil: Dourados, Mato Grosso do Sul | | Rodrigues et al. (2006) |
|  |  | **AY773703** | *T. theileri* | | | | Tthb13 | *Bubalus bubalis* | Brazil: Dourados, Mato Grosso do Sul | | Rodrigues et al. (2006) |
|  |  | **AY773704** | *T. theileri* | | | | Tthc8 | *Bos taurus* | Brazil: Porto Alegre, Rio Grande do Sul | | Rodrigues et al. (2006) |
|  |  | **AY773705** | *T. theileri* | | | | Tthc9 | *Bos taurus* | Brazil: Londrina, Paraná | | Rodrigues et al. (2006) |
|  |  | **AY773706** | *T. theileri* | | | | Tthc10 | *Bos taurus* | Brazil: Paraná | | Rodrigues et al. (2006) |
|  |  | **AY773707** | *T. theileri* | | | | Tthc2 | *Bos taurus* | Brazil: Jacupiranga, São Paulo | | Rodrigues et al. (2006) |
|  |  | **AY773708** | *T. theileri* | | | | Tthc16 | *Bos taurus* | Brazil: Miranda, Mato Grosso do Sul | | Rodrigues et al. (2006) |
|  |  | **AY773714** | *Trypanosoma* sp. | | | | D30 | *Cervus dama* | Germany | | Rodrigues et al. (2006) |
|  |  | **GQ176146** | *T. theileri* | | | | Tthc30\_3 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ176147** | *T. theileri* | | | | Tthc32\_6 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ176148** | *T. theileri* | | | | Tthc37\_2 | *Bos taurus* | Brazil: Bujaru, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ176149** | *T. theileri* | | | | Tthc38\_2 | *Bos taurus* | Brazil: Bujaru, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ176150** | *T. theileri* | | | | Tthc39\_2 | *Bos taurus* | Brazil: Santarém, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ176151** | *T. theileri* | | | | Tthc41\_1 | *Bos taurus* | Brazil: Bujaru, Pará | | Rodrigues et al. (2010) |
|  |  | **HQ664808** | *T. theileri* | | | | Tthb10 | *Bubalus bubalis* | Brazil: Eldorado, São Paulo | | Garcia et al. (2011) |
|  |  | **HQ664809** | *T. theileri* | | | | Tthb14 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664810** | *T. theileri* | | | | Tthb17 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664811** | *T. theileri* | | | | Tthb19 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664812** | *T. theileri* | | | | Tthb20 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664813** | *T. theileri* | | | | Tthb22 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664814** | *T. theileri* | | | | TthbV9 | *Bubalus bubalis* | Venezuela: San Felipe, Yaracuy | | Garcia et al. (2011) |
|  |  | **HQ664815** | *T. theileri* | | | | TthbV13 | *Bubalus bubalis* | Venezuela: El Baul, Cojedes | | Garcia et al. (2011) |
|  |  | **HQ664816** | *T. theileri* | | | | TthbV15 | *Bubalus bubalis* | Venezuela: El Baul, Cojedes | | Garcia et al. (2011) |
|  |  | **HQ664817** | *T. theileri* | | | | Tthc1 | *Bos taurus* | Brazil: Jacupiranga, São Paulo | | Garcia et al. (2011) |
|  |  | **HQ664818** | *T. theileri* | | | | Tthc29\_1 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Garcia et al. (2011) |
|  |  | **HQ664819** | *T. theileri* | | | | Tthc30\_4 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Garcia et al. (2011) |
|  |  | **HQ664820** | *T. theileri* | | | | Tthc32\_4 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Garcia et al. (2011) |
|  |  | **HQ664821** | *T. theileri* | | | | Tthc32\_5 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Garcia et al. (2011) |
|  |  | **HQ664822** | *T. theileri* | | | | Tthc37\_5 | *Bos taurus* | Brazil: Bujaru, Pará | | Garcia et al. (2011) |
|  |  | **HQ664823** | *T. theileri* | | | | Tthc39\_4 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664824** | *T. theileri* | | | | Tthc39\_3 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664825** | *T. theileri* | | | | Tthc40\_2 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664826** | *T. theileri* | | | | Tthc40\_3 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664827** | *T. theileri* | | | | Tthc41\_6 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664828** | *T. theileri* | | | | Tthc41\_3 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664829** | *T. theileri* | | | | TthcV2\_7 | *Bos taurus* | Venezuela: El Baul, Cojedes | | Garcia et al. (2011) |
|  |  | **HQ664830** | *T. theileri* | | | | TthcV4\_10 | *Bos taurus* | Venezuela: San Felipe, Yaracuy | | Garcia et al. (2011) |
|  |  | **HQ664831** | *T. theileri* | | | | TthcV6 | *Bos taurus* | Venezuela: Merida, Merida | | Garcia et al. (2011) |
|  |  | **HQ664832** | *T. theileri* | | | | CepCamp4\_1 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664833** | *T. theileri* | | | | CepCamp4\_2 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664834** | *T. theileri* | | | | CepCamp4\_3 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664835** | *T. theileri* | | | | CepCamp4\_4 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664842** | *T. theileri* | | | | SitaBip1\_1 | *Tragelaphus spekii* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664843** | *T. theileri* | | | | SitaBip1\_2 | *Tragelaphus spekii* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664844** | *T. theileri* | | | | SitaBip1\_4 | *Tragelaphus spekii* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664845** | *Trypanosoma* sp. | | | | D30\_2 | *Cervus dama* | Germany | | Garcia et al. (2011) |
|  |  | **HQ664846** | *Trypanosoma* sp. | | | | D30\_3 | *Cervus dama* | Germany | | Garcia et al. (2011) |
|  |  | **HQ664847** | *T. theileri* | | | | Treu124\_2 | *Bos taurus* | Germany | | Garcia et al. (2011) |
|  |  | **HQ664848** | *T. theileri* | | | | Treu124\_3 | *Bos taurus* | Germany | | Garcia et al. (2011) |
|  |  | **HQ664849** | *T. theileri* | | | | Treu124\_5 | *Bos taurus* | Germany | | Garcia et al. (2011) |
|  |  | **HQ664850** | *T. theileri* | | | | TmHR1\_1 | *Melophagus ovinus* | Croatia: Goljak, Zagreb | | Garcia et al. (2011) |
|  |  | **HQ664851** | *T. theileri* | | | | TmHR1\_4 | *Melophagus ovinus* | Croatia: Goljak, Zagreb | | Garcia et al. (2011) |
|  |  | **HQ664852** | *T. theileri* | | | | TmHR1\_3 | *Melophagus ovinus* | Croatia: Goljak, Zagreb | | Garcia et al. (2011) |
|  |  | **HQ664853** | *T. theileri* | | | | TthHR1\_1 | *Bos taurus* | Croatia: Pula | | Garcia et al. (2011) |
|  |  | **HQ664854** | *T. theileri* | | | | TthHR1\_2 | *Bos taurus* | Croatia: Pula | | Garcia et al. (2011) |
|  |  | **HQ664855** | *T. theileri* | | | | TthHR1\_4 | *Bos taurus* | Croatia: Pula | | Garcia et al. (2011) |
|  |  | **JN673395** | *T. theileri* | | | | Z18106 | *Kobus vardonii* | Zambia: Musalangu Game Management Area | | 2006.08.29. |
|  |  | **JN673396** | *T. theileri* | | | | ZPU2807 | *Kobus vardonii* | Zambia: North Luangwa National Park | | 2007.09.21. |
|  |  | **JN673397** | *T. theileri* | | | | ZPU2707 | *Kobus vardonii* | Zambia: North Luangwa National Park | | 2007.09.21. |
|  |  | **JN798601** | *Trypanosoma* sp. | | | | ACR-2011\_TC2 | *–* | *–* | | Martinković et al. (2012) |
|  |  | **JN798602** | *Trypanosoma* sp. | | | | ACR-2011\_TC3 | *Cervus elaphus* | Croatia | | Martinković et al. (2012) |
|  |  | **JN798603** | *Trypanosoma* sp. | | | | ACR-2011\_TC4 | *–* | *–* | | Martinković et al. (2012) |
|  |  | **JN798604** | *Trypanosoma* sp. | | | | ACR-2011\_TC9 | *–* | *–* | | Martinković et al. (2012) |
|  |  | **JN798605** | *Trypanosoma* sp. | | | | ACR-2011\_TC10 | *–* | *–* | | Martinković et al. (2012) |
|  |  | **JN798606** | *Trypanosoma* sp. | | | | ACR-2011\_TC603 | *–* | *–* | | Martinković et al. (2012) |
|  |  | **JN798607** | *Trypanosoma* sp. | | | | ACR-2011\_TC603 | *–* | *–* | | Martinković et al. (2012) |
|  |  | **JN798608** | *T. theileri* | | | | TthHR1 | *–* | *–* | | Martinković et al. (2012) |
|  |  | **JX178162** | *T. theileri* | | | | Cow-2095\_Cl-8 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178163** | *T. theileri* | | | | Cow-2095\_Cl-9 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178164** | *T. theileri* | | | | Cow-2\_Cl-4 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178165** | *T. theileri* | | | | Cow-2\_Cl-7 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178166** | *T. theileri* | | | | Cow-2\_Cl-10 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178167** | *T. theileri* | | | | Cow-3535\_Cl-3 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178168** | *T. theileri* | | | | Cow-3535\_Cl-6 | *Bos taurus* | USA: Webb, Texas | | 2010.03. |
|  |  | **JX178169** | *T*. cf. *cervi* | | | | WTD-NL15\_Cl-1 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2010.07. |
|  |  | **JX178170** | *T*. cf. *cervi* | | | | WTD-NL15\_Cl-6 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2010.07. |
|  |  | **JX178171** | *T*. cf. *cervi* | | | | WTD-NL15\_Cl-9 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2010.07. |
|  |  | **JX178172** | *Trypanosoma* sp. | | | | WTD-A3\_Cl-9.1 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178173** | *Trypanosoma* sp. | | | | WTD-A3\_Cl-9.4 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178174** | *T*. cf. *cervi* | | | | WTD-A21\_Cl-4 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178175** | *T*. cf. *cervi* | | | | WTD-A21\_Cl-5 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178176** | *T*. cf. *cervi* | | | | WTD-A21\_Cl-6 | *Odocoileus virginianus* | USA: Zapata, Texas | | 2011.05. |
|  |  | **JX178177** | *Trypanosoma* sp. | | | | Elk-142\_Cl-9 | *Cervus canadensis* | USA: Minnesota | | Fisher et al. (2013) |
|  |  | **JX178178** | *Trypanosoma* sp. | | | | Elk-142\_Cl-10 | *Cervus canadensis* | USA: Minnesota | | Fisher et al. (2013) |
|  |  | **JX178179** | *T*. cf. *cervi* | | | | Elk-416\_Cl-8 | *Cervus canadensis* | USA: Minnesota | | Fisher et al. (2013) |
|  |  | **JX178180** | *T*. cf. *cervi* | | | | Elk-328\_Cl-3 | *Cervus canadensis* | USA: Minnesota | | Fisher et al. (2013) |
|  |  | **JX178183** | *T. theileri* | | | | Cow-139\_Cl-9 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178184** | *T. theileri* | | | | Cow-139\_Cl-10 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178185** | *T. theileri* | | | | Cow-139\_Cl-11 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178186** | *T. theileri* | | | | Cow-133\_Cl-1 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178187** | *T. theileri* | | | | Cow-104\_Cl-1 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178188** | *T. theileri* | | | | Cow-104\_Cl-2 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX178189** | *T. theileri* | | | | Cow-104\_Cl-3 | *Bos taurus* | USA: Starr, Texas | | 2010.03. |
|  |  | **JX853182** | *T*. cf. *cervi* | | | | WTD-A1\_6 | *Odocoileus virginianus* | USA | | Fisher et al. (2013) |
|  |  | **JX853183** | *T*. cf. *cervi* | | | | WTD-A1\_7 | *Odocoileus virginianus* | USA | | Fisher et al. (2013) |
|  |  | **JX853184** | *Trypanosoma* sp. | | | | Elk-421\_2 | *Cervus canadensis* | USA | | Fisher et al. (2013) |
|  |  | **JX853185** | *T. theileri* | | | | Cow-2095\_4 | *Bos taurus* | USA | | Fisher et al. (2013) |
|  |  |  |  | | | |  |  |  | |  |
| **3. gGAPDH gene sequnces** | | | | | | | | | | | |
|  | **3.1. Newly obtained in the present study** | | | | | | | | | | |
|  |  | **LC618037** | *T. theileri* | | | | YMG-11 | *Cervus nippon aplodontus* | | Japan: Shimonoseki, Yamaguchi | 2013.12.14 |
|  |  |  |  | | | | YMG-14 | *Cervus nippon aplodontus* | | Japan: Shimonoseki, Yamaguchi | 2014.02.22 |
|  |  | **LC618038** | *T. theileri* | | | | OSK-16 | *Bos taurus* | | Japan: Miyazaki | 2015.08.10 |
|  |  |  |  | | | | OSK-120 | *Bos taurus* | | Japan: Shimane-Hiroshima | 2015.08.25 |
|  |  |  |  | | | | OSK-148 | *Bos taurus* | | Japan: Miyazaki-Saga | 2015.08.31 |
|  |  |  |  | | | | OSK-150 | *Bos taurus* | | Japan: Nagasaki-Saga | 2015.08.31 |
|  |  |  |  | | | | OSK-155 | *Bos taurus* | | Japan: Miyazaki-Nagano | 2015.08.31 |
|  |  |  |  | | | | OSK-172 | *Bos taurus* | | Japan: Kagoshima-Kumamoto | 2015.08.31 |
|  |  | **LC618039** | *T. theileri* | | | | TNB-872 | *Cervus nippon aplodontus* | | Japan: Tanabe, Wakayama | 2008.11.19 |
|  |  | **LC618040** | *T. theileri* | | | | KSM-941 | *Cervus nippon aplodontus* | | Japan: Kushimoto, Wakayama | 2009.10.11 |
|  | **3.2. Retrieved from the GenBank** | | | | | | | | | | |
|  |  | **AB362413** | *T. kuseli* | | | | *–* | *Pteromys volans* | Japan (imported from Russia) | | 2005.04.16. |
|  |  | **AB362557** | *T. grosi* | | | | SESUJI | *Apodemus agrarius* | Russia: Vladivostok | | Sato et al. (2003) |
|  |  | **AB362558** | *T. grosi* | | | | HANTO | *Apodemus peninsulae* | Russia: Vladivostok | | Sato et al. (2003) |
|  |  | **AJ620273** | *T. microti* | | | | TRL132 | *Microtus agrestis* | England | | Hamilton et al. (2004) |
|  |  | **AJ620276** | *Trypanosoma* sp. | | | | kangaroo H25 | *Macropus giganteus* | Australia | | Hamilton et al. (2004) |
|  |  | **AJ620278** | *Trypanosoma* sp. | | | | wallaby ABF | *Wallabia bicolor* | Australia | | Hamilton et al. (2004) |
|  |  | **AJ620280** | *Trypanosoma* sp. | | | | TL.AQ.22 | *Philaemon* sp. | Australia | | Hamilton et al. (2004) |
|  |  | **AJ620282** | *T. theileri* | | | | K127 | *Bos taurus* | Germany | | Bose et al. (1993) |
|  |  | **FJ649493** | *T. cyclops* | | | | *–* | *–* | *–* | | McInnes et al. (2009) |
|  |  | **FM164792** | *T. theileri* | | | | *–* | *Tragelaphus\_spekei* | Cameroon | | Hamilton et al. (2009) |
|  |  | **HF545653** | *T. theileri* | | | | uganda12\_61\_89 | *Bos taurus* | Uganda | | Adams, Hamilton, Mugasa & Schallig (unpublished—2009) |
|  |  | **HF545654** | *T. theileri* | | | | uganda29 | *Bos taurus* | Uganda | | Adams, Hamilton, Mugasa & Schallig (unpublished—2009) |
|  |  | **HQ664784** | *T. theileri* | | | | Tthb10 | *Bubalus bubalis* | Brazil: Eldorado, São Paulo | | Garcia et al. (2011) |
|  |  | **HQ664785** | *T. theileri* | | | | Tthb14 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664786** | *T. theileri* | | | | Tthb16 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664787** | *T. theileri* | | | | Tthb17 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664788** | *T. theileri* | | | | Tthb19 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664789** | *T. theileri* | | | | Tthb20 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664790** | *T. theileri* | | | | Tthb22 | *Bubalus bubalis* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664791** | *T. theileri* | | | | TthbV15 | *Bubalus bubalis* | Venezuela: El Baul, Cojedes | | Garcia et al. (2011) |
|  |  | **HQ664792** | *T. theileri* | | | | Tthc1 | *Bos taurus* | Brazil: Jacupiranga, São Paulo | | Garcia et al. (2011) |
|  |  | **HQ664793** | *T. theileri* | | | | Tthc3 | *Bos taurus* | Brazil: Eldorado, São Paulo | | Garcia et al. (2011) |
|  |  | **HQ664794** | *T. theileri* | | | | Tthc39 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664795** | *T. theileri* | | | | Tthc40 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664796** | *T. theileri* | | | | Tthc41 | *Bos taurus* | Brazil: Santarém, Pará | | Garcia et al. (2011) |
|  |  | **HQ664797** | *T. theileri* | | | | TthcV4 | *Bos taurus* | Venezuela: San Felipe, Yaracuy | | Garcia et al. (2011) |
|  |  | **HQ664798** | *T. theileri* | | | | TthcV5 | *Bos taurus* | Venezuela: San Fernando, Apure | | Garcia et al. (2011) |
|  |  | **HQ664799** | *T. theileri* | | | | Tthc29 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Garcia et al. (2011) |
|  |  | **HQ664801** | *T. theileri* | | | | Tthc30 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Garcia et al. (2011) |
|  |  | **HQ664802** | *T. theileri* | | | | Tthc32 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Garcia et al. (2011) |
|  |  | **HQ664803** | *T. theileri* | | | | Tthc37 | *Bos taurus* | Brazil: Bujaru, Pará | | Garcia et al. (2011) |
|  |  | **HQ664804** | *T. theileri* | | | | CepCamp4 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664805** | *T. theileri* | | | | CepCamp5 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664806** | *T. theileri* | | | | D30 | *Cervus dama* | Germany | | Garcia et al. (2011) |
|  |  | **HQ664807** | *T. melophagium* | | | | TmHR1 | *Melophagus ovinus* | Croatia: Goljak, Zagreb | | Garcia et al. (2011) |
|  |  | **MN756794** | *T. trinaperronei* | | | | WTD2268 | *Odocoileus virginianus* | Venezuela: Anzoátegui, Simón Bolivar | | Garcia et al. (2020) |
|  |  |  |  | | | |  |  |  | |  |
| **4. CatL-like gene sequnces** | | | | | | | | | | | |
|  | **4.1. Newly obtained in the present study** | | | | | | | | | | |
|  |  | **LC618041** | *T. theileri* | | | | YMG-11 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  |  | **LC618042** | *T. theileri* | | | | YMG-14 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  |  | **LC618043** | *T. theileri* | | | | YMG-15 | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  | **4.2. Retrieved from the GenBank** | | | | | | | | | | |
|  |  | **GU299350** | *T. theileri* | | | | Tthc32\_1 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GU299351** | *T. theileri* | | | | Tthc32\_2 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GU299352** | *T. theileri* | | | | Tthc32\_3 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GU299354** | *T. theileri* | | | | Tthc30\_2 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GU299355** | *T. theileri* | | | | Tthc30\_5 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GU299356** | *T. theileri* | | | | Tthc38\_1 | *Bos taurus* | Brazil: Castanhal, Pará | | Rodrigues et al. (2010) |
|  |  | **GU299357** | *T. theileri* | | | | Tthc38\_2 | *Bos taurus* | Brazil: Castanhal, Pará | | Rodrigues et al. (2010) |
|  |  | **GU299359** | *T. theileri* | | | | Tthc28\_1 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GU299361** | *T. theileri* | | | | Tthc28\_4 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GU299363** | *T. theileri* | | | | Tthc29\_3 | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GU299366** | *T. theileri* | | | | Tthc12\_6 | *Bos taurus* | Brazil: Miranda, Mato Grosso do Sul | | Rodrigues et al. (2010) |
|  |  | **GU299369** | *T. theileri* | | | | Tthc14\_4 | *Bos taurus* | Brazil: Miranda, Mato Grosso do Sul | | Rodrigues et al. (2010) |
|  |  | **GU299372** | *T. theileri* | | | | Tthc19\_2 | *Bos taurus* | Brazil: Monte Negro, Rondônia | | Rodrigues et al. (2010) |
|  |  | **GU299375** | *T. theileri* | | | | Tthb2\_3 | *Bubalus bubalis* | Brazil: Pariquera-Açu, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299376** | *T. theileri* | | | | Tthb2\_4 | *Bubalus bubalis* | Brazil: Pariquera-Açu, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299380** | *T. theileri* | | | | Tthb4\_3 | *Bubalus bubalis* | Brazil: Registro, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299381** | *T. theileri* | | | | Tthb10\_2 | *Bubalus bubalis* | Brazil: Eldorado, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299383** | *T. theileri* | | | | Tthb9\_2 | *Bubalus bubalis* | Brazil: Jacupiranga, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299385** | *T. theileri* | | | | Tthb9\_4 | *Bubalus bubalis* | Brazil: Jacupiranga, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299386** | *T. theileri* | | | | Tthb3\_2 | *Bubalus bubalis* | Brazil: Pariquera-Açu, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299387** | *T. theileri* | | | | Tthb3\_3 | *Bubalus bubalis* | Brazil: Pariquera-Açu, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299390** | *T. theileri* | | | | Tthb6\_1 | *Bubalus bubalis* | Brazil: Jacupiranga, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299391** | *T. theileri* | | | | TthATCC\_1 | *Bos taurus* | USA: Pennsylvania | | Rodrigues et al. (2010) |
|  |  | **GU299392** | *T. theileri* | | | | TthATCC\_2 | *Bos taurus* | USA: Pennsylvania | | Rodrigues et al. (2010) |
|  |  | **GU299393** | *T. theileri* | | | | TthATCC\_3 | *Bos taurus* | USA: Pennsylvania | | Rodrigues et al. (2010) |
|  |  | **GU299395** | *T. theileri* | | | | Tthc16\_2 | *Bos taurus* | Brazil: Miranda, Mato Grosso do Sul | | Rodrigues et al. (2010) |
|  |  | **GU299398** | *T. theileri* | | | | Tthc2\_4 | *Bos taurus* | Brazil: Jacupiranga, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299399** | *T. theileri* | | | | Tthc2\_5 | *Bos taurus* | Brazil: Jacupiranga, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299400** | *T. theileri* | | | | Tthc1\_2 | *Bos taurus* | Brazil: Jacupiranga, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299402** | *T. theileri* | | | | Tthc9\_4 | *Bos taurus* | Brazil: Londrina, Paraná | | Rodrigues et al. (2010) |
|  |  | **GU299403** | *T. theileri* | | | | Tthc10\_1 | *Bos taurus* | Brazil: Londrina, Paraná | | Rodrigues et al. (2010) |
|  |  | **GU299405** | *T. theileri* | | | | Tthc8\_1 | *Bos taurus* | Brazil: Porto Alegre, Rio Grande do Sul | | Rodrigues et al. (2010) |
|  |  | **GU299410** | *T. theileri* | | | | Tab12\_1 | *Tabanus* sp. | Brazil: Miranda, Mato Grosso do Sul | | Rodrigues et al. (2010) |
|  |  | **GU299411** | *T. theileri* | | | | Tab12\_6 | *Tabanus* sp. | Brazil: Miranda, Mato Grosso do Sul | | Rodrigues et al. (2010) |
|  |  | **GU299412** | *T. theileri* | | | | Tab12\_2 | *Tabanus* sp. | Brazil: Miranda, Mato Grosso do Sul | | Rodrigues et al. (2010) |
|  |  | **GU299413** | *T. theileri* | | | | Tab7VR\_1 | *Tabanus* sp. | Brazil: Registro, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299414** | *T. theileri* | | | | Tab7VR\_4 | *Tabanus* sp. | Brazil: Registro, São Paulo | | Rodrigues et al. (2010) |
|  |  | **GU299415** | *Trypanosoma* sp. | | | | D30\_1 | *Cervus dama* | Germany | | Rodrigues et al. (2010) |
|  |  | **GU299416** | *Trypanosoma* sp. | | | | D30\_2 | *Cervus dama* | Germany | | Rodrigues et al. (2010) |
|  |  | **GU299417** | *Trypanosoma* sp. | | | | D30\_4 | *Cervus dama* | Germany | | Rodrigues et al. (2010) |
|  |  | **HQ664736** | *T. theileri* | | | | TthbV9\_2 | *Bubalus bubalis* | Venezuela: San Felipe, Yaracuy | | Garcia et al. (2011) |
|  |  | **HQ664737** | *T. theileri* | | | | TthbV13\_3 | *Bubalus bubalis* | Venezuela: El Baul, Cojedes | | Garcia et al. (2011) |
|  |  | **HQ664738** | *T. theileri* | | | | TthbV15\_1 | *Bubalus bubalis* | Venezuela: El Baul, Cojedes | | Garcia et al. (2011) |
|  |  | **HQ664743** | *T. theileri* | | | | TthcV2\_1 | *Bos taurus* | Venezuela: El Baul, Cojedes | | Garcia et al. (2011) |
|  |  | **HQ664744** | *T. theileri* | | | | TthcV4\_3 | *Bos taurus* | Venezuela: San Felipe, Yaracuy | | Garcia et al. (2011) |
|  |  | **HQ664745** | *T. theileri* | | | | SitaBip1\_1 | *Tragelaphus spekii* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664746** | *T. theileri* | | | | SitaBip1\_2 | *Tragelaphus spekii* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664747** | *T. theileri* | | | | SitaBip1\_4 | *Tragelaphus spekii* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664748** | *T. theileri* | | | | CepCamp4\_1 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664749** | *T. theileri* | | | | CepCamp5\_1 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664750** | *T. theileri* | | | | CepCamp5\_2 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **HQ664751** | *T. theileri* | | | | CepCamp5\_4 | *Cephalophus monticola* | Cameroon | | Garcia et al. (2011) |
|  |  | **MN747149** | *T. trinaperronei* | | | | WTD2268\_c1 | *Odocoileus virginianus* | Venezuela: Anzoátegui, Simón Bolivar | | Garcia et al. (2020) |
|  |  | **MN747150** | *T. trinaperronei* | | | | WTD2268\_c2 | *Odocoileus virginianus* | Venezuela: Anzoátegui, Simón Bolivar | | Garcia et al. (2020) |
|  |  | **MN747151** | *T. trinaperronei* | | | | WTD2268\_c3 | *Odocoileus virginianus* | Venezuela: Anzoátegui, Simón Bolivar | | Garcia et al. (2020) |
|  |  | **MN747153** | *T. trinaperronei* | | | | WTD2268\_c8 | *Odocoileus virginianus* | Venezuela: Anzoátegui, Simón Bolivar | | Garcia et al. (2020) |
|  |  | **MN747154** | *T. trinaperronei* | | | | Tt.LM1 | *Lipoptena mazamae* | Venezuela: Anzoátegui, Simón Bolivar | | Garcia et al. (2020) |
|  |  | **MN747155** | *T. trinaperronei* | | | | Tt.LM2 | *Lipoptena mazamae* | Venezuela: Anzoátegui, Simón Bolivar | | Garcia et al. (2020) |
|  |  |  |  | | | |  |  |  | |  |
| **5. Spliced leader (SL) gene sequnces** | | | | | | | | | | | |
|  | **5.1. Newly obtained in the present study** | | | | | | | | | | |
|  |  | **LC618044** | *T. theileri* | | YMG-11\_c1 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  |  | **LC618045** | *T. theileri* | | YMG-11\_c6 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  |  | **LC618046** | *T. theileri* | | YMG-11\_c10 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2013.12.14 |
|  |  | **LC618047** | *T. theileri* | | YMG-14\_c2 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  |  | **LC618048** | *T. theileri* | | YMG-14\_c3 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  |  | **LC618049** | *T. theileri* | | YMG-14\_c1 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  |  | **LC618050** | *T. theileri* | | YMG-14\_c6 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  |  | **LC618051** | *T. theileri* | | YMG-14\_c7 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  |  | **LC618052** | *T. theileri* | | YMG-14\_c8 | | | *Cervus nippon aplodontus* | Japan: Shimonoseki, Yamaguchi | | 2014.02.22 |
|  | **5.2. Retrieved from the GenBank** | | | | | | | | | | |
|  |  | **GQ162134** | *T. theileri* | | Tthc30\_4 | | | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ162135** | *T. theileri* | | Tthc32\_3 | | | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ162136** | *T. theileri* | | Tthc32\_7 | | | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ162137** | *T. theileri* | | Tthc32\_10 | | | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ162138** | *T. theileri* | | Tthc37\_1 | | | *Bos taurus* | Brazil: Bujaru, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ162139** | *T. theileri* | | Tthc37\_2 | | | *Bos taurus* | Brazil: Bujaru, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ162140** | *T. theileri* | | Tthc37\_10 | | | *Bos taurus* | Brazil: Bujaru, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ162149** | *T. theileri* | | Tthc23\_3 | | | *Bos taurus* | Brazil: Sao Mamede, Paraíba | | Rodrigues et al. (2010) |
|  |  | **GQ162150** | *T. theileri* | | Tthc23\_5 | | | *Bos taurus* | Brazil: Sao Mamede, Paraíba | | Rodrigues et al. (2010) |
|  |  | **GQ162151** | *T. theileri* | | Tthc23\_1 | | | *Bos taurus* | Brazil: Sao Mamede, Paraíba | | Rodrigues et al. (2010) |
|  |  | **GQ162152** | *T. theileri* | | Tthc24\_1 | | | *Bos taurus* | Brazil: Sao Mamede, Paraíba | | Rodrigues et al. (2010) |
|  |  | **GQ162153** | *T. theileri* | | Tthc24\_3 | | | *Bos taurus* | Brazil: Sao Mamede, Paraíba | | Rodrigues et al. (2010) |
|  |  | **GQ162154** | *T. theileri* | | Tthc25\_2 | | | *Bos taurus* | Brazil: Patos, Paraíba | | Rodrigues et al. (2010) |
|  |  | **GQ162156** | *T. theileri* | | Tthc29\_3 | | | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ162157** | *T. theileri* | | Tthc29\_7 | | | *Bos taurus* | Brazil: Mossoró, Rio Grande do Norte | | Rodrigues et al. (2010) |
|  |  | **GQ162158** | *T. theileri* | | Tthc27\_2 | | | *Bos taurus* | Brazil: Catolé do Rocha, Paraíba | | Rodrigues et al. (2010) |
|  |  | **GQ162159** | *T. theileri* | | Tthc27\_3 | | | *Bos taurus* | Brazil: Catolé do Rocha, Paraíba | | Rodrigues et al. (2010) |
|  |  | **GQ162160** | *T. theileri* | | Tthc39\_1 | | | *Bos taurus* | Brazil: Santarém, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ162161** | *T. theileri* | | Tthc39\_3 | | | *Bos taurus* | Brazil: Santarém, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ162162** | *T. theileri* | | Tthc39\_5 | | | *Bos taurus* | Brazil: Santarém, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ162163** | *T. theileri* | | Tthc40\_1 | | | *Bos taurus* | Brazil: Santarém, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ162164** | *T. theileri* | | Tthc40\_5 | | | *Bos taurus* | Brazil: Santarém, Pará | | Rodrigues et al. (2010) |
|  |  | **GQ162166** | *T. theileri* | | Tthc41\_5 | | | *Bos taurus* | Brazil: Santarém, Pará | | Rodrigues et al. (2010) |
|  |  | **HQ664890** | *T. melophagium* | | TmHR1\_2 | | | *Melophagus ovinus* | Croatia: Goljak | | Rodrigues et al. (2010) |
|  |  | **HQ664891** | *T. melophagium* | | TmHR1\_5 | | | *Melophagus ovinus* | Croatia: Goljak | | Rodrigues et al. (2010) |
|  |  | **HQ664892** | *T. melophagium* | | TmHR1\_4 | | | *Melophagus ovinus* | Croatia: Goljak | | Rodrigues et al. (2010) |