

TsSable AY748462 : TGCATTGCCCTTTCTCCTT**GATGAGTTGA**TGCA--TTGCGGCTATTTCGG**TCATGGCTT**-----TCCTTCCCGGATGTTTAC : 77
 TsDamaliscus_HQ179765 : TGCATTGCCCTTTCTCCTT**GATGAGTTGA**TGCA--TTGCGGCTATTTCGG**TCATGGCTT**-----TCCTTCCCGGATGTTTAC : 77
 TsSable-like_GU733378 : TGCATTG**CTTATCTCCTT**GATGAGTTGA--TTGCGGCTATTTCGG**TCATGGCTT**-----TCCTTCCCGGATGTTTAC : 77
 TsDamaliscus_HQ179766 : TGCATTGCCCTTTCTCCTT**GATGAGTTGA**TGCA--TTGCGGCTATTTCGG**TCATGGCTT**-----TCCTTCCCGGATGTTTAC : 77
 TsDama_AY735116 : TGCCTGCCCTCCTCCTT**GATGAGTTGA**TGCA--TTGCGGCTATTTCGG**TCATGGCTT**-----TCCTTCCCGGATGTTTAC : 76
 Ttaurotragi_L19082 : TGCAT**TGTCGAGTCCCTCCG**---GGGTCTTGGC--ACGTGGCTATTTCGGACGGTT-----CGCTGTCTGGATGTTTAC : 70
 Ttau_Tragelaphini_MK131255 : TGCAT**TGCTGGTCCCTCCG**---GGGTCTTGGC--ACGTGGCTATTTCGGACGGTT-----CGCTGTCTGGATGTTTAC : 70
 Tparva_AF013418 : TGCATCGCTGTGTCCCTTCG---GGGTCTTGGC--ATGTGGCTATTTCGGACGGAG**TTCTC**-----**GCTTTGTCTGGATGTTTAC** : 74
 TsBuffalo_DQ641260 : TGCATCGCTGTGTCCCTTCG---GGGTCTTGGC--ATGTGGCTATTTCAGACGGAG**TTCTC**-----**ACTTTGTCTGGATGTTTAC** : 74
 TsBougasvlei_GU570997 : TGCATCGCTGTGTCCCTTCG---GGGTCTTGGC--ATGTGGCTATTTCAGACGGAG**TTCTC**-----**CTTTGTCTGGATGTTTAC** : 73
 Tlestoquardi_AF081135 : TGCATTGCTTGTGTCCCTCC---GGGTCTTGGC--ATGTGGCTATTTCGGACGGAG**TTCTC**-----**CTTTGTCTGGATGTTTAC** : 74
 Tannulata_AY524666 : TGCATTGCTTGTGTCCCTCC---GGGTCTTGGC--ATGTGGCTATTTCGGACGGAG**TTCTC**-----**CTTTGTCTGGATGTTTAC** : 74
 TsTragelaphini_A_MK131246 : TGCATGGCTTGTGTCCCT**TC**---**GGCTTT**TGGC--ATGTGGCTATTTCGGGCATT-----TTTGTCCCGGATGTTTAC : 69
 TsTragelaphini_B_MK131247 : TGCATGGCTTGTGTCCCT**TC**---**GGCTTT**TGGC--ATGTGGCTATTTCGGGCATT-----TTTGTCCCGGATGTTTAC : 69
 TsTragelaphini_C_MK131248 : TGCATGGCTTGTGTCCCT**TC**---**GGCTTT**TGGC--ATGTGGCTATTTCGGGCATT-----TTTGTCCCGGATGTTTAC : 69
 Tbuffeli_EF126184 : TGCATTAATTAATCTCTTTCG---TGAGTTAGTTA--TTGCGGCTATTTCGGATGATTTT-----TTCTTCCCGGATGTTTAC : 74
 Tbuffeli_EF104611 : TGCATTA**ACTTA**ACTCTTTCG---TGAGTTAGTTA--TTGCGGCTATTTCGGATGATTTT-----TTCTTCCCGGATGTTTAC : 74
 Tbuffeli_C_GU733373 : TGCATTAATTTTCTCATGT---**CGAGTTA**TTA--TTGCGGCTATTTCGGATGATTTT-----TTCTTCCCGGATGTTTAC : 74
 Tbuffeli_D_U97052 : TGCATCGTGCATCTCTTGC---TGAGTCTTTCG---TTGCGGCTATTTCGGATGATTTT-----TTCTTCCCGGATGTTTAC : 74
 Tsinensis_GU733372 : TGCATATTTCATCTCTTGT---TGAGT**GATTCG**---**TTGC**GGCTATTTCGGATGATTTT-----TTCTTCCCGGATGTTTAC : 74
 TbuffeliWarwick_AB000272 : TGCATTA**ACTTCTCTT**GT---TGAGT**TTCTT**---TTGCGGCTATTTCGGATGATTTT-----TTCTTCCCGGATGTTTAC : 74
 Tbuffeli_Marula_Z15106 : TGCATT**CAATTCCTCTT**CT---GAGT**TTCTT**---TTGCGGCTATTTCGGATGATTTT-----TTCTTCCCGGATGTTTAC : 73
 TsRudu_AY748465 : TGCATTGTTTCTTCTTTCG---GGT**TTCTT**---TTGCGGCTATTTCGGATGATTTT-----**TTGCTTCCCGGATGTTTAC** : 76
 TsTragelaphini_D_MK131250 : TGCATTGTTTCTTCTTTCG---**GGT**TTCTT---TTGCGGCTATTTCGGATGATTTT-----**TTGCTTCCCGGATGTTTAC** : 74
 TsTragelaphini_E_MK131251 : TGCATTGTTTCTTCTTTCG---**GGT**TTCTT---TTGCGGCTATTTCGGATGATTTT-----**TTGCTTCCCGGATGTTTAC** : 74
 TsAepyrocrotini_MK131245 : TGCATCGCTTGTCTCTTGA---**TGAGT**ATTCGG---TTGCGGCTATTTCGGACATTGCTTC-----GGTTTGTCCCGGATGTTTAC : 77
 TsWaterbuck-like_MK131256 : TGCATTGCTCCTGCTCCTTT---CGAGCTCGTGA--TTGCGGCTATTTCGGACTCGCTTC-----**TCGCTTCCCGGATGTTTAC** : 76
 TsWaterbuck_KF597064 : TGCATTGCTCCTGCTCCTTT---CGAGCTCGTGA--TTGCGGCTATTTCGGACTCGCTTC-----**TCGCTTCCCGGATGTTTAC** : 76
 Tovis_FJ608727 : TGCATTGCTTGTCTCCTTACGAGTCTTGA---TTGCGGCTATTTCGGACT**TTGTT**-----**TCAAT**GTCCCGGATGTTTAC : 78
 TsGrants_KP641656 : TGCATTGCTTGTCTCCTTATGAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----TTCAATGTCCCGGATGTTTAC : 78
 TsThriviae_AB981981 : TGCATTGCA**TTTCTCCT**AGACAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----ATATTTCCCGGATGTTTAC : 77
 TsRoedeer_GU373980 : TGCATTGCA**TTTCTCCT**AGACAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----ATATTTCCCGGATGTTTAC : 78
 TsGiraffe_JQ928910 : TGCCTTGTGCAGCGCTCCTTGCAGG**TTCTTGA**---TGTTGGCTATTTCGGATGATTTT-----GGCGTTTCCCGGATGTTTAC : 79
 TsGiraffe_JQ928921 : TGCCTAC**ATTGCTCCT**AGACAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----TTGCTTCCCGGATGTTTAC : 79
 TsGiraffe505_FJ213583 : TGCCTTGT**TTAGCTCCT**TGATGG**CTTGA**---CTGCGGCTATTTCGGATGATTTT-----TTGCTTCCCGGATGTTTAC : 79
 TsImpala_MK131253 : TGCATCGCTTGTCTCT**TA**---**GAGT**TTAGCA---TTGCGGCTATTTCGGATGATTTT-----CATTTCCCGGATGTTTAC : 73
 TsImpala2_MK131254 : TGCATCGCTTGTCTCT**TA**---**GAGT**TTAGCA---TTGCGGCTATTTCGGATGATTTT-----CATTTCCCGGATGTTTAC : 74
 TsReindeer_JN086222 : TGCATTGCTTGTCTCCTTACGAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----CATTTCCCGGATGTTTAC : 75
 Tseparata_AY260175 : TGCATTGCTTGTCTCCTTATGAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----TCCTTCCCGGATGTTTAC : 77
 TsReel8_FJ155995 : TGCATTGCTTGTCTCCTTATGAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----TCCTTCCCGGATGTTTAC : 77
 TsGrants_KP641655 : TGCATTGCTTGTCTCCTTATGAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----TCCTTCCCGGATGTTTAC : 77
 TsConnochaetes_KT163244 : TGCCTTGTCTT**TTCTCCT**TGATGAGT**TTTGA**---TTGGGCTATTTCGGATGATTTT-----TCCTTGTCCCGGATGTTTAC : 77
 TsGreyDuiker_AY748466 : TGCATTGTA**TTATCCATTT**---GGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----TCCTTGTCCCGGATGTTTAC : 76
 TsGiraffe_JQ928914 : TGT**TTTGT**AT**TTCTCCT**TGACGAGT**TTTGA**---TAATGGCTATTTCGGATGATTTT-----ACCATTTCCCGGATGTTTAC : 80
 TsGiraffe405_FJ213582 : TGCCTTGT**TTCTCCT**TGACGAGT**TTTGA**---TCGTGGCTATTTCGGATGATTTT-----GGCTTGTCCCGGATGTTTAC : 79
 TsGiraffe_JQ928927 : TGCCTTGT**TTCTCCT**TGACGAGT**TTTGA**---TCGTGGCTATTTCGGATGATTTT-----GGCTTGTCCCGGATGTTTAC : 78
 TsGiraffe2_MK131258 : TGCCTTGT**TTCTCCT**TGACGAGT**TTTGA**---TCGTGGCTATTTCGGATGATTTT-----GGCTTGTCCCGGATGTTTAC : 78
 TsGiraffe_JQ928919 : TGCCTTGT**TTCTCCT**TGACGAGT**TTTGA**---TCGTGGCTATTTCGGATGATTTT-----GGCTTGTCCCGGATGTTTAC : 72
 Tcapreoli_MH179334 : TGCATTGTA**TTTCTCCT**TGACGAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----TTTATTTCCCGGATGTTTAC : 80
 TsGiraffe_JQ928924 : TGCATTATAGT**TACTCCT**TGAGT**TTTGA**---TTGCGGCTATTTCGGATGATTTT-----TTAGATTTCCCGGATGTTTAC : 84
 TsGiraffel_MK131257 : CGCGTGT**TAATTTCTCCT**ATCG---AGT**TAATGA**---TCGTGGCTATTTCGGATGATTTT-----**TAT**TCCCGGATGTTTAC : 73
 Tvelifera_AF097993 : TACATTGCT**CTTCTCCTT**ACGAGT**TTGGTCTT**TTGGCTTATCTGGGTTCGCTTC-----TTCCCGGATGTTTAC : 75
 Tvelifera-like_GU733376 : TACATTGCT**CTTCTCCTT**ACGAGT**TTGGTCTT**TTGGCTTATCTGGGTTCGCTTC-----GTTCCCGGATGTTTAC : 76
 TveliferaA_GU733375 : TGCATTGCTTCTCCTAT**ACGAGCTTGGC**---TTGCGGCTATTTCGGATGATTTT-----GTTCCCGGATGTTTAC : 74
 Tmutans_AF078815 : CGCATCGCGCGCGCC**CTCC**---GGCCACGCG---TTGCGGCTATTTCGGACTCGCTTC-----GTTCCCGGATGTTTAC : 73
 Tmutans-like1_FJ213585 : TGCATCGCCACGGCC**CTCC**---GGCCACGCG---TTGCGGCTATTTCGGACTCGCTTC-----GATCCCGGATGTTTAC : 71
 Tmutans-like3_GU733377 : AGCATCGCCACGGCC**CTCC**---GGCCACGCG---TTGCGGCTATTTCGGACTCGCTTC-----ATCTCCGATGTTTAC : 71
 Tmutans-like2_FJ213586 : CGCC**CGACGAGCC**ACG---GGCCACGCG---TTGCGGCTATTTCGGACTCGCTTC-----ATCTCCGATGTTTAC : 71
 Tmutans_Tragelaphini_MK131252 : TGCATCGTTCGGCCCT**CCG**---GGCCCGGG---TTGCGGCTATTTCGGATGATTTT-----**GT**TCCCGGATGTTTAC : 71
 TmutansMSD_AF078816 : CGCCCGCCCGCGCC**CTCC**---GGCCCGGG---TTGCGGCTATTTCGGACTCGCTTC-----CGCCCGGATGTTTAC : 69
 TsConnochaetes_KT163245 : TCCATTGTTTTTCTCCTT**GAGGAGTTGA**TGCA--TTGCGGCTATTTCGGATGATTTT-----TCCTTCCCGGATGTTTAC : 77
 TsGiraffe_JQ928930 : TGCCTTGCACCCCTCATGCTGAGT**TTCTTA**---TGTTGGCTATTTCGGATGATTTT-----TGCGTTTCTCAGT**TTTAC** : 79

Figure 1: Electronic codes were searched against the amplified V4 hypervariable region and highlighted in yellow. Each corresponds to a specific genotype.

Table 1: Electronic codes for each genotype identified in the study

Theileria genotype	Accession number	Electronic signature
<i>Theileria buffeli</i> B	GU733376	TTTCTCTTCT
<i>Theileria buffeli</i> C	GU733373	CGAGTTAATTAT
<i>Theileria buffeli</i> Warwick	AB000272	TATCTCTTGTTT
<i>Theileria</i> cf. <i>velivera</i> A	GU733375	CGAGCTTGG
<i>Theileria mutans</i>	AF078815	CTCCCGGGC
<i>Theileria mutans</i> MSD	AF078816	CCGGCGTCG
<i>Theileria mutans</i> -like 1	FJ213585	CTTGCGATG
<i>Theileria mutans</i> -like 2	FJ213586	CGACGAGACC
<i>Theileria mutans</i> -like 3	GU733377	CCACGCGTTG
<i>Theileria mutans</i> -like Tragelaphini	MK131252	TTGCGTTTCCGG
<i>Theileria ovis</i>	FJ608727	GTTTTACAAT
<i>Theileria parva</i>	AF013418	TCGCTTTGT
<i>Theileria separata</i>	AY260175	TTCTCTTGTA
<i>Theileria sinensis</i> -like	GU733372	GTGATTCGTTGC
<i>Theileria</i> sp. (bougasvlei)	GU570997	TTCTTTGTCTGG
<i>Theileria</i> sp. (buffalo)	DQ641260	TTACTTTGT
<i>Theileria</i> sp. Aepycerotini	MK131245	GAGTATTGCG
<i>Theileria</i> sp. Giraffe 0405	FJ213582	GACGAGTTATG
<i>Theileria</i> sp. Giraffe 0505	FJ213583	GATGGGCTTTT
<i>Theileria</i> sp. Giraffe 1A	MK131257	GTATAGTTTCT
<i>Theileria</i> sp. Giraffe 2A	MK131258	GCATTGCTTTGCATT
<i>Theileria</i> sp. Giraffe NG2012b	JQ928927	GCCGAGTTTCAG
<i>Theileria</i> sp. Giraffe NG-2012b	JQ928914	TGACGAGTTATAA
<i>Theileria</i> sp. Impala Cervidae-like 1	MK131253	AAGAGTTTTAGC
<i>Theileria</i> sp. Impala Cervidae-like 2	MK131254	TCCTTACGAG
<i>Theileria</i> sp. Kudu	AY748465	TTGCTTTCCGGATTG
<i>Theileria</i> sp. Ree18	FJ155995	ATCTCTTGATGA
<i>Theileria</i> sp. Sable	AY748462	GATGAGTTGA-----TCATGGTTT
<i>Theileria</i> sp. Sable-like	GU733378	CTTTATCTCCTT
<i>Theileria</i> sp. Tragelaphini A	MK131246	TCGGGCTT
<i>Theileria</i> sp. Tragelaphini B	MK131247	TTGGGCTT
<i>Theileria</i> sp. Tragelaphini C	MK131248	TGCCCTC
<i>Theileria</i> sp. Tragelaphini D	MK131250	CCTTCGTGT
<i>Theileria</i> sp. Tragelaphini E	MK131251	CCTTTGTGT
<i>Theileria</i> sp. Waterbuck	KF597072	TCGCTGTCCGGATGATTA
<i>Theileria</i> sp. Waterbuck-like	MK131256	TCGCTGTCCGGATTT
<i>Theileria taurotragi</i>	L19082	TGTCGAGTCCCTCCG
<i>Theileria taurotragi</i> -like Tragelaphini	MK131255	TGCTGGTCCCTCCG
<i>Theileria velifera</i>	AF097993	CTATTCTCCTTT
<i>Theileria velifera</i> B	GU733376	CCTTTCTCCTTT