

Supporting Information for:

Phylogeny of parasitic Parabasalia and free-living relatives inferred from conventional markers vs. *Rpbl*, a single-copy gene

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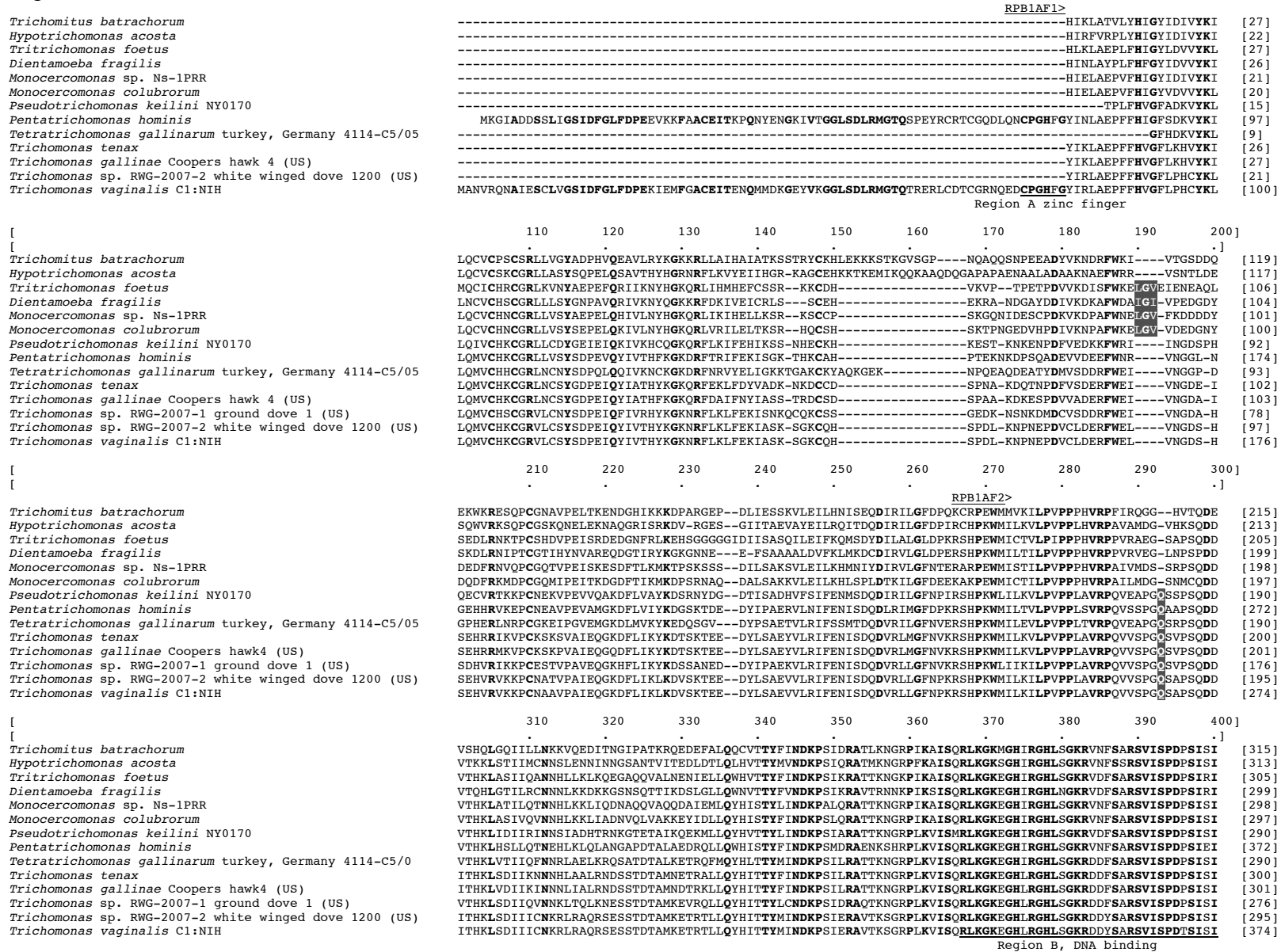
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Figure S1: Alignment of Parabasalid Rpb1 proteins indicating conserved regions A-H (underlined), with 100% identical amino acid residues indicated in **bold**, conserved insertions **highlighted in grey**, and the α -amanitin sensitive region highlighted by a black box. Dashes indicate gaps or missing data. Arrows indicate the positions of PCR primers. Amino acid positions are indicated numerically in parentheses.



[		410	420	430	440	450	460	470	480	490	500]	
[.]	
		<u>RPB1C2F></u>								<u>TVRPB1DF></u>	<u>RPB1C1F></u>	
<i>Trichomitus batrachorum</i>		DQVGVPFELAKILTFPEVNSLNIKDMQQLVYNGPDSQDGAKAVITPLGARFSLGDTQESTVQHLVDYGSVVERHLRDNDDIVIFNRQPSLHKMSMMGHYAK										[415]
<i>Hypotrichomonas acosta</i>		DQVGVPQEIARILTFPEVVTARMLTEMQRVLYNGNEAQEGANVYITPQCTRINLAVTQESTAMQLDHDSDIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[413]
<i>Trichomonas foetus</i>		DQVGVPQEIARILTFPEVVTARMLTEMQRVLYNGNEAQEGANVYITPQCTRINLAVTQESTAMQLDHDSDIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[405]
<i>Dientamoeba fragilis</i>		DQVGVPKHAKILTFPEVVTARNDRELYRLVQNGPDELQGANFVINPQGRFSLRSTTERTTTTHLDDGSIVERHLQDNDIVIFNRQPSLHKMSMMGHAV										[399]
<i>Monocercomonas sp.Ns1PRR</i>		DQVGVPLEIAKVLTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[398]
<i>Monocercomonas colubrorum</i>		DQVGVPLEIAKVLTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[397]
<i>Pseudotrichomonas keilini NY1070</i>		DQVGVPKELAKILTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[390]
<i>Pentatrichomonas hominis</i>		DQVGVPKELAKILTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[472]
<i>Tetratrichomonas gallinarum turkey, Germany 4114-C5/05</i>		DQVGVPKELAKILTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[390]
<i>Trichomonas tenax</i>		DQVGVPKELAKILTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[400]
<i>Trichomonas gallinae Coopers hawk 4 (US)</i>		DQVGVPKELAKILTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[401]
<i>Trichomonas sp. RWG-2007-1 ground dove 1 (US)</i>		DQVGVPKELAKILTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[376]
<i>Trichomonas sp. RWG-2007-2 white winged dove 1200 (US)</i>		DQVGVPKELAKILTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[395]
<i>Trichomonas vaginalis Cl:NIH</i>		DQVGVPKELAKILTFPEVVTARNDRELYRLVQNGPDAQGANVYITPQGRINLAVTEERSALHLADNAIVERHLRDDDDIVIFNRQPSLHKMSMMGHRAR										[474]

Region C

[		510	520	530	540	550	560	570	580	590	600]	
[.]	
		<u>RPB1DF>RPB1DF2><TVRPB1DR</u>										
<i>Trichomitus batrachorum</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[515]
<i>Hypotrichomonas acosta</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[512]
<i>Trichomonas foetus</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[504]
<i>Dientamoeba fragilis</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[431]
<i>Monocercomonas sp. Ns-1PRR</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[496]
<i>Monocercomonas colubrorum</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[495]
<i>Monotrichomonas carabina</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[73]
<i>Pseudotrichomonas keilini NY1070</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[422]
<i>Pentatrichomonas hominis</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[571]
<i>Tetratrichomonas gallinarum turkey Germany 4114-C5/05</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[404]
<i>Trichomonas tenax</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[499]
<i>Trichomonas gallinae Coopers hawk 4 (US)</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[500]
<i>Trichomonas sp. RWG-2007-1 ground dove 1 (US)</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[475]
<i>Trichomonas sp. RWG-2007-2 white winged dove 1200 (US)</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[494]
<i>Trichomonas vaginalis Cl:NIH</i>		LIRGQSFRLNLCVTPPYNADFQDGMNHLVVPQQTARAEVKHIMAVPYQIITPQSNKPIIGLVQDCLVGCRLLSIRDFTFLTRNELMNLMMWIMDTKPDV										[573]

Region D, Mg++ binding

[		610	620	630	640	650	660	670	680	690	700]	
[.]	
<i>Trichomitus batrachorum</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[609]
<i>Hypotrichomonas acosta</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[609]
<i>Trichomonas foetus</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[598]
<i>Monocercomonas sp. Ns-1PRR</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[586]
<i>Monocercomonas colubrorum</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[585]
<i>Monotrichomonas carabina</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[168]
<i>Pentatrichomonas hominis</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[666]
<i>Trichomonas tenax</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[591]
<i>Trichomonas gallinae Coopers hawk 4 (US)</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[593]
<i>Trichomonas sp. RWG-2007-1 ground dove 1 (US)</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[567]
<i>Trichomonas sp. RWG-2007-2 white winged dove 1200 (US)</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[586]
<i>Trichomonas vaginalis Cl:NIH</i>		LPPPCIVAP---QELWSGKQVFSFLFPKINLDKFS--SPADDKGAD-KSNWSDDVVRVIRRDGHLLAGIIDSKTVAKSEGSLTHVIVINSYSLDTAKAFPLN										[665]

[		710	720	730	740	750	760	770	780	790	800]	
[.]	
<i>Trichomitus batrachorum</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[708]
<i>Hypotrichomonas acosta</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[708]
<i>Trichomonas foetus</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[697]
<i>Monocercomonas sp. Ns-1PRR</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[685]
<i>Monocercomonas colubrorum</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[684]
<i>Monotrichomonas carabina</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[268]
<i>Pentatrichomonas hominis</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[765]
<i>Trichomonas tenax</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[690]
<i>Trichomonas gallinae Coopers hawk 4 (US)</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[692]
<i>Trichomonas sp. RWG-2007-1 ground dove 1 (US)</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[666]
<i>Trichomonas sp. RWG-2007-2 white winged dove 1200 (US)</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[685]
<i>Trichomonas vaginalis Cl:NIH</i>		QTQLVNNWLEHRGFSIGLSDCLAYEKTLDDVSDQIHQLKRNVDLIDQAKHGKLETPPGLTFMEGFESEKINKLLNDLINDTGATVQKASRFWNSLMQM										[764]

[810 820 830 840 850 860 870 880 890 900]
[.]
Trichomitus batrachorum MQAGSKGSKVNIAQIIACVGGQSI EGERVRFGFKNRTLPHYVKDDFDLESRGFVEHSYIQGLTPOEFFFHSMGGRTGI IDTACKTADTGYIQRRLCKTME [808]
Hypotrichomonas acosta VAAGSKGSLNINISQIIAVVQQNVEGKRIRYGFKGRTLPHYVKDDFDLECRGFCHEHSYIQGLTPOEFFFHSMGGRTGI IDTACKTADTGYIQRRLCKSME [808]
Tritrichomonas foetus VAAGSKGSLNINISQIIATVQQNIEGKRIRYGFKGRTLPHYVKDDFDLGLESRGFCHEHSYIQGLTPOEFFFHSMGGRTGI IDTACKTADTGYIQRRLCKSME [797]
Monocercomonas sp. Ns-1PRR VAAGSKGSLNINISQIIACVQQNVEGKRVPNGFKNRTLPHYFKDDVGLKAEAGFCHEHSYIQGLTPOEFFFHSMGGRTGI IDTACKTADTGYIQRRLCKSME [785]
Monocercomonas colubrorum VAAGSKGSLNINISQIIACVQQNVEGKRVPNGFKNRTLPHYFKDDVGLKAEAGFCHEHSYIQGLTPOEFFFHSMGGRTGI IDTACKTADTGYIQRRLCKSME [784]
Monotrichomonas carabina VNAGSKGSKNINISQIIACVQQNVEGKRIRYGFKGRTLPHYTKDDGLSESRGFVMSYIIGLTPAEFFHSMGGREGITDACKTADTGYIQRRLCKAME [786]
Pentatrichomonas hominis NMAGSKGADNSISQIIASVQQNMEGKRVRFGFKNRTLPHYQKHYGLVERGFCHEHSYIIEGLTPEFFLPHAMGGRTGI IDTACKTADTGYIQRRLCKSME [865]
Trichomonas tenax LTAGSKGADNFVTVIGVVAQQNIEGKRVRFGFKNRTLPHYQKHYGLVPRGFCHEHSYIIEGLTPEFFLPHAMGGRTGI IDTACKTADTGYIQRRLCKSME [790]
Trichomonas gallinae Coopers hawk 4 (US) LTAGSKGADNFVTVIGVVAQQNIEGKRVRFGFKNRTLPHYQKHYGLVPRGFCHEHSYIIEGLTPEFFLPHAMGGRTGI IDTACKTADTGYIQRRLCKSME [792]
Trichomonas sp. RWG-2007-1 ground dove 1 (US) LSAGSKGADNSISQIIIGVQQNMEGKRVRFGFKNRTLPHYQKHYGLVPRGFCVNSYIAGLTPPEFLPHAMGGRTGI IDTACKTADTGYIQRRLCKSME [766]
Trichomonas sp. RWG-2007-2 white winged dove 1200 (US) LSAGSKGADNTMSQIIIGVQQNMEGKRVRFGFKNRTLPHYQKHYGLVERGFCVNSYIAGLTPPEFLPHAMGGRTGI IDTACKTADTGYIQRRLCKSME [785]
Trichomonas vaginalis Cl:NIH LSAGSKGADNTMSQIIIGVQQNMEGKRVRFGFKNRTLPHYQKHYGLVERGFCVNSYIAGLTPPEFLPHAMGGRTGI IDTACKTADTGYIQRRLCKSME [864]
Region E alpha aamtin sensitive/resistant; Translocation Region F

[910 920 930 940 950 960 970 980 990 1000]
[.]
Trichomitus batrachorum SHCVYDGTVRDSMNNVQFLYGGDIDPVQIETQSLSLIALSDQEFDSMYKMNINDPVFGAGYLESSIIISDLRKMEGTPTTTITGNFGGRSEEVEITRP [908]
Hypotrichomonas acosta SHCVYDGTVRNSLNEIVQFIYGGDLEPPKLETKQCPLEISLDRVDFRVMENDPFVGVGKIQRDIIENLRS-----DVRS [887]
Tritrichomonas foetus SHCVYDGTVRNSLNEIVQFIYGGDLDPVGLETONLTFMGDSDEDFDRKFRPDLTQAFFGQGMQDQIIVDELMS-----NPNHT [877]
Monocercomonas sp. Ns-1PRR SHCVYDGTIRNSLNEIVQFLYGGDMDPICLETKQIRLLSMDNDQFRNEYEFDLISLPTFGQGMNADTIDEMNE-----NISAT [865]
Monocercomonas colubrorum SHCVYDGTVRNSLNEIVQFIYGGDMDPICLETKQISIPLEMDNDEFREYFDLSLPTFGQGMIRQVEIDGMND-----NISAT [864]
Monotrichomonas carabina SHQVAYDGTVRNSLNEIVQFIYGGADYDATSLETONVRLVNMDKAFRQINPHELDIDNADPFIQGMQHSIEELRN-----DPLA [447]
Pentatrichomonas hominis SHHVAYDGTVRNSLNEIVQFIYGGDGLDATGLETONLRLSVMGDRFSEYEMVDDATFGQVMQRIIDVQN-----MQNR [944]
Trichomonas tenax SHHVAYDGTVRNSLNEIVQFIYGGDGLDATGLETOFLNLVLDLKKFDQYHNMVDDPTFGSEAMDANILEEFLN-----TPGK [869]
Trichomonas gallinae Coopers hawk 4 (US) SHHVAYDGTVRNSLNEIVQFIYGGDGLDATGLETOQLRLVLDVDCDDTKFKYHYLSPEDFLPFGTDCMDSNVLDEFLN-----TPGK [871]
Trichomonas sp. RWG-2007-1 ground dove 1 (US) SHHVAYDGTVRNSLNEIVQFIYGGDGLDATGLETOQLRLVLDVLDKAFNKLHYLNVDDPTFGQDAMDANVLEDFLR-----SMDK [845]
Trichomonas sp. RWG-2007-2 white winged dove 1200 (US) SHHVAYDGTVRNSLNEIVQFIYGGDGLDATGLETOQLALVTLNDEKFMKKYHLASEDPTFGQVEMDDFVLDFLK-----TPNK [864]
Trichomonas vaginalis Cl:NIH SHHVAYDGTVRNSLNEIVQFIYGGDGLDATGLETOQLALVTLNDEDFMKYHLATEDPTFGQVEMDDFVLDFLK-----TPNK [943]

[1010 1020 1030 1040 1050 1060 1070 1080 1090 1100]
[.]
Trichomitus batrachorum SAVLQEEIDLTLHFRQILREEIFPNNGQKLYASVNLKRIIETAQRKYNINEYTSLSLDNPNVLLVSEVKKLVSRLLIIVQQNKDKIGREVQNGTLLLRLLI [1008]
Hypotrichomonas acosta QERLQAEKTRLDPRDLRTEIFPNNGDSVITLRSKVRQLIDTSKTVDHINEHTNINSLNLPYFVIDEVDKLAQLVVPVGD-DPIGREAQDNATLLMRILQ [986]
Tritrichomonas foetus KNRLDHEINRLKFRQILREEIFPDASNKVWLVPVNIIRLLIESAQSHHINPHESKSNLNPVTVIOKVEELVDQVIVKGE-DALSREAQDNATLLLRHII [976]
Monocercomonas sp. Ns-1PRR RTILNARETERLRLKFRQILREEIFPSGEGSVLFPVNIIRLLETAQQTGCHINPHSDKSDLHPINVIESVENIKLVVVPGD-DVYSKEAQDNATLLLRHII [964]
Monocercomonas colubrorum KDVLQKEIARLKHFRILREEVFPATGSGVYLPVNIIGRLIQAQQIHNINPHSDRDLHPIHVDSVEKLVSKLIVVKG-DYIQKEAQDNATLLLRVLL [963]
Monotrichomonas carabina RDILNISEINLGSALRKLREEVFTDAKNRVALINISRLLETARNMNYINEYVSIISDLRPLDVIKRVEEKIQSLIVVQGN-DRI SRKAQDNATLLMRALM [946]
Pentatrichomonas hominis HDVLSNIEKRLQDRLQQLQTEIFLKGESKVVLPVNIITRIIQTSQQMQGGINVHSKSNLNDPVIIRRVDEKIRSLIVVKG-DIAIVTAQDNATLLLRIML [1043]
Trichomonas tenax EKKLQDETRLKEFRELQTEIFPPGNTKVVLPVNIINISRIESSQRQFQINPHASISDLNPLDVIAKQVDCVNSLTIIVKGN-DSISLRAQDNATLLLRKIML [968]
Trichomonas gallinae Coopers hawk 4 (US) ENRKLHEENRLEFRLEILQTEIFPPGNTKVVLPVNIIRLLETSQRQFQINPHASISDLNPLDVISRVEECANSLTIIVKGN-DSISRTAQDNATLLLRKIML [970]
Trichomonas sp. RWG-2007-1 ground dove 1 (US) DKKLQEEHRLKEFRELQTEIFPPGSDTVVLPVNIARIIESSQRQFQINPHASISDLNPLDIARVDECVNSLTIIVKGN-DTISRRAQDNATLLLRIML [943]
Trichomonas sp. RWG-2007-2 white winged dove 1200 (US) DKFLKEEENRLEFRLEILQTEIFPPGNSNTVLPVNIARIIESSQRQFQINPHASISDLNPLDIISRVEECVNSLTIIVKGN-DNISRTAQDNATLLLRIML [964]
Trichomonas vaginalis Cl:NIH DKFLKEEENRLEFRLEILQTEIFPPGNSNTVLPVNIARIIESSQRQFQINPHASISDLNPLDIISRVEECVNSLTIIVKGN-DNISRTAQDNATLLLRIML [1042]

[1110 1120 1130 1140 1150 1160 1170 1180 1190 1200]
[.]
Trichomitus batrachorum <RPB1GR2 <RPB1GR1
HATLASKPLIEKNRSLQAFRSIIIEIEDRFYRTIVSPGEMVGTIAGQSIGEPATQ----- [1070]
Hypotrichomonas acosta YTLASKPLILKERLSMDAFKWIIEIEERFPETIVAPGEMVGTIAGQSIGEPSTQ----- [1048]
Tritrichomonas foetus FSNLASKPVIFQHRLTEQALIFVLGKTRFVQTVSPGEMVGTIAGQSIGEPSTQMTLNTFFHAGVSAKNVTLGVPRLNEVMNLA RVMKTPQVTVVLEP [1076]
Monocercomonas sp. Ns-1PRR YSNLAAKTLIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPATQ----- [1026]
Monocercomonas colubrorum YSNLAAKTLIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPATQ----- [1025]
Monotrichomonas carabina YSNLAAKTLIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPATQ----- [596]
Pentatrichomonas hominis YSNLAAKQIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPSTQMTLNTFFHAGISAKDVTLGVPRLNEIMNLAQIKTPCVTVILDY [1143]
Trichomonas tenax YSNLAAKQVIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPSTQ----- [1022]
Trichomonas gallinae Coopers hawk 4 (US) FSNLAAKQVIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPSTQ----- [1029]
Trichomonas sp. RWG-2007-1 ground dove 1 (US) FSNLAAKQVIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPSTQ----- [998]
Trichomonas sp. RWG-2007-2 white winged dove 1200 (US) YSNLAAKQVIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPSTQ----- [1026]
Trichomonas vaginalis Cl:NIH YSNLAAKQVIFKYLRLNEIAFKYVVLGEVEVAFVKSIVSPGEMVGTIAGQSIGEPSTQMTLNTFFHAGISAHVDVTLGVPRLNEIMNLAQIKTPCVTVIFEFR [1142]
Region G, elongation, TFIIS binding

Tritrichomonas foetus DSRG-----DKDKAKDIAQEALESSLKKLV-ARSEIYDPSDMNSMIEE-DEWARYQ--GRED----SSNLSPVWLRLV [1141]
Pentatrichomonas hominis NSNNQDDGSDMDDEEDRSVRQKQELDAALAKDVRANVE-CAAFKFKVTKSEIFVDEPADNTTIDEDREWIGIY-INNQLDFN-IDNYSVWLRF [1240]
Trichomonas vaginalis Cl:NIH DVAK-----DEEIVKAVRAQIE-SASFKKVFKAEIYYDPNPEETIIEPD-TKWINTRIRYGGVEDRELQDLAPVWLRF [1215]
LNQAALVDKNINPIEIVEKINILYANVYAIITNEGSSGDP IIRIRGLMNDKSFEDKGRALQFAEQHLYDLSLKGIEGINRAVMEETTRYEVDPNESAF [1241]
LDVKSLLASVNSLPIEQRAIENSYSSELFSVIFEGNMANAASSFPPIRIRPTKSLVQKNGKTDESEFFLREIEQQLYDERAISIKGIPGIRRVKIDQKA [1340]
INRE-EMIASNIIESISDIIVQKIKMGYDKFVFIIGDDARIIRMQRALRDKQAEFAMDVKFLRETEQQMYKSPFLTKGIPGISRVKINSAAEKMFLPNETHG [1314]

Tritrichomonas foetus NTERKECKHEWVLYTEGSALREVLNHPVDCR-----RSVSNINILETLEILGIEAAROSILI----- [1299]
Pentatrichomonas hominis KRKVLDEEDH-HWVKSDDPQLITETGALKAILGLDHDIDKLYTNDINIEYDVLGIEAARNLSLCEMMIMDAGASLNRRLDLDLADTMQYGRLYPVSR [1439]
Trichomonas vaginalis Cl:NIH FDKEVSKL-YTEGTAFREILSLDHVDTV-----HTITNDIYQVCDVLGIEAARHSLSYEMMLIMEKAGAAALNRRLDLDLADTMQYGVLYPVSR [1403]
Region H