Supplemental Tables

A novel fragmented mitochondrial genome in the protist pathogen *Toxoplasma gondii* and related tissue coccidia

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Table S1 - Primer sequences and corresponding *Toxoplasma gondii* sequence blocks

Primer Name (sequence block)	Sequence	Sequence Block Co-ordinates
A1	5'-GTT TGA TGG AAC TAT CAC ATC CAG ATA A-3'	153-126
A2	5'-CAA AAG CCG CTT GTA AGA AGA TTA ATC-3'	154-180
BM1	5'-AGT GCA TTA AGT ATA GTG GTA TCC AGC GTA-3'	B (19-1) M (1-11)
C1	5'-GGG TTC TGT GTT AGT AAC TCA AAG TA-3'	1-24
C2	5'-TGA TTG GTT AAT TGG AGG ACT TGC TGT-3'	110-136
C3	5'-AAG ACA CTA TCA CCA GAA TAC ATA GAA TC-3'	367-339
C4	5'-AGA TAC AAC ACC AAA AGC AGG TAG AA-3'	417-442
C5	5'-TTC TAC CTG CTT TTG GTG TTG TAT CT-3'	442-417
C6	5'-GTT TGA GAT ACA ACA CCA AAA GCA GG-3'	447-422
C7	5'-ACA TGA TGA CTG TCG GTC TAG AAG TAG A-3'	546-573
C8 or H1	5'-GAT AAT CAG GGT AAT CTG GGA TCC-3'	1040-1017
C9	5'-ATC AGG GTA ATC TGG GAT CCT T-3'	1037-1016
D1	5'-TTC AGG AGC ATA CCG TTA TAT TCG ATG AT-3'	37-65
D2	5'-ATC ATC GAA TAT AAC GGT ATG CTC CTG AA-3'	65-37
D3	5'-TAA TGT GAA CAC ATA AGA TCA TCG AAT ATA AC-3'	83-51
E1	5'-TTG ATA CCG CGC TTA AAG TTG CCT-3'	59-36
E2	5'-CGT AGT AAC CTC CAA GTA GCC AAG G-3'	183-207
E3	5'-AAC TAC CGC TTG GAT GTC TGG TTT AG-3'	352-327
E4	5'-TGG TTT CTT AGT TGC AAT GAC CTT TGT-3'	583-557
E5	5'-TCT TTT ATC GGT GTG CTC TAA ATC T-3'	58-82
F1	5'-GGG GAC AAA AAG ACA TCA CGA T-3'	179-162
K1	5'-CTG AGT ACG TAA GGA AAA GGA AAG G-3'	1-25
K2	5'-AAC GTA ACA AAC CTC GAG GCA AAG A-3'	200-176
K3	5'-TCT TTG CCT GGA GGT TTG TTA CGT T-3'	176-200
MB1	5'-TAC GCT GGA TAC CAC TAT ACT TAA TGC ACT-3'	M (11-1) B (1-19)
M1	5'-TAT CCA GCG TAT ATT TGA AAA ACC AAC ATT-3'	1-30
M2	5'-TCA TGT TAT TGT CGG TGC TAT CTT GG-3'	179-204
M3	5'-CCG ACA ATA ACA TGA CTG AAA TGT ATA C-3'	193-166
M4	5'-GCT ATC TTG GGT TTC TTT AAT CAG GG-3'	195-220
M5	5'-GAT CAT TAT CCA CAC TGC TTC GAC GA-3'	359-334
M6	5'-ATC CAC ACT GCT TCG ACG AAA TGT AGA-3'	352-326
M7	5'-TAC GTG ACG AGC GGT GTG TTT AA-3'	754-732
M9	5'-AGA GAT AGA ATG TAA CGT GGA TCA T-3'	378-354
N1	5'-ATA GCT GTG ATG TTA AGG AGC ATA GGA A-3'	1-24
N2	5'-GAA GTT ATG GTT TTG GGC TCG TGA GT-3'	121-96
O1	5'-TGT GTA ACA GGG AGT CTA GCT TCA GTT-3'	36-62
R1	5'-ATT TAG CTC ACT GCG TAC TTA GGA TC-3'	44-69
R2	5'-AGA TAC AAG GAA CTT GAC AAG CAT TAC-3'	43-17
T1	5'-GAT TAG CTA CTA TCT TAT ACC TTA CTA CC-3'	180-208
T2	5'-GTT AGT ATA AGC ATA GAA CCA ATC CG-3'	232-208
T3	5'-AAG CAT AGA ACC AAT CCG GTA G-3'	226-205
SV1	5'-AGT TAT ACA GTT CTG GTT CGC GGA TCA T-3'	S (9-28) V (154-161)
SV2	5'-ATG ATC CGC GAA CCA GAA CTG TAT AAC T-3'	S (20-1) V (161-154)
V1	5'-TGG ACT GCT TAA GAC AGC TAA AAG T-3'	45-21
V2	5'-TGG TTG TCT GTA TCT CAT AAC TGG A -3'	0

Table S2. BLAST comparison of *Toxoplasma gondii* mtDNA sequence blocks to other publicly available apicomplexan mtDNA or genome sequences

P. falciparum				*E. tenella*				*T. gondii*		*N. caninum*					*Hammondia*					*S. neurona*				
mtDNA		Tg Block		mtDNA		Tg Block				Contig			Tg Block		oxoDB.org Contig/NCBI sequenc			Tg Block		ToxoDB.org Contig/NCBI sequence			Tg Block	
Start	Stop	Start	Stop	Start	Stop	Start	Stop	Sequence Block	Length	Contig	Start	Stop	Start	Stop	Contig/ Sequence ID	Start	Stop	Start	Stop	Contig/Sequence ID	Start	Stop	Start	Stop
4164	4364	10	192	727	912	4	189	A*	196	Contig8315	9607	9802	1	196	KL545313	167	362	1	196	KT207462.1	640	741	1	102
not found				not found				B*	40	Contig8315	2644	2683	1	40	KL544033	659216	659255	1	40	not found				
2383	2571	6	194																					
2614	3048	234	668	1518	2561	6	1049	C*	1050	Contig8315	7173	6124	1	1050	JX473251.1	1493	2542	1	1050	SnSN1_scaffold00666	5	973	81	1049
3079	3273	699	893																					
3253	3402	894	1043																					
not found				not found				D	82	Contig8315	1992	2073	1	82	KL544028	581003	581083	2	82	SnSN1_scaffold01461	474	504	15	45
3504	3782	30	308	73	720	33	680	E*	683	Contig8315	8924	9606	1	683	JX473260.1	377	1059	1	683	KT207462.1	1	639	45	683
3783	4151	312	680																					
5864	5911	19	65	3799	3879	19	99	F^	179	Contig8315	2855	3033	1	179	KL544045	676029	675851	1	179	SnSN1_scaffold01461	593	508	19	104
5577	5772	54	245	3002	2965	12	49	H^	447	Contig8315	9987	10433	1	447	JX473270.1	1068	631	1	438	sneu_contig02982	705	376	1	330
				5593	5780	57	243																	
not found				6072	6094	25	47	I^	204	CADU01000139	1565	1362	1	204	JX473262.1	265	468	1	204	SnSN1_scaffold01461	256	360	1	101
				3160	3224	92	156														801	905	98	202
5877	5845	13	45	4418	4441	2	25	J*	85	Contig8315	1627	1543	1	85	KL544027	3083220	3083136	1	85	sneu_scaffold00016	462040	461960	5	85
395	505	156	271	3599	3566	81	114	K^	445	Contig8315	5443	5887	1	445	JX473261.1	469	913	1	445	SnSN1_scaffold01922	324	205	155	274
				3520	3480	105	145																	
629	662	410	443	3295	3264	146	275																	
				5371	5499	412	443																	
1333	1256	77	154	4328	4414	71	157	L*	159	Contig8315	1786	1628	1	159	KL554933	156	314	1	159	SnSN1_scaffold02568	348	467	38	157
1060	911	54	203	4625	4786	51	212									1056505	1056602	1	104	SnSn1_scaffold00839	522	680	60	218
1520	1613	384	477	2701	2898	397	593	M*^	754	Contig8315	3787	3034	1	754	KL544043	293595	294050	104	560	sneu_scaffold00012	1134260	1134101	427	586
382	285	491	589	3447	3379	627	695									881359	881102	478	742		1134010	1134052	629	671
1659	1675	736	752	5937	5892	708	752									275663	275757	660	754		1134789	1134750	715	754
not found				not found				N	166	Contig8315	4612	4777	1	166	JX473266.1	484	649	1	166	sneu_contig02982	296	239	61	118
low evalue- small match				not found				O^	86	Contig8315	2769	2854	1	86	KL558884	1350452	1350537	1	86	low evalue- small match				
low evalue- bad match				not found				P	184	Contig8315	9803	9986	1	184	JX473270.1	447	630	1	184	SnSN1_scaffold00004	5274306	5274250	128	184
2526	2564	2	40	low evalue- bad match				Q*	65	Contig8315	1478	1542	1	65	KL544030	303803	303867	1	65	low evalue- small match				
low evalue- small match				not found				R	85	Contig8315	4522	4438	1	85	KL544067	90510	90594	1	85	SnSN1_scaffold00050	183223	183141	2	84
2173	2376	1	204	1308	1511	1	204	S*	205	Contig8315	922	1126	1	205	JX473255.1	733	937	1	205	SnSN1_scaffold02197	247	450	1	204
4446	4619	99	272	922	1122	3	203	T*	279	Contig8315	4878	5155	1	278	JX473250.1	848	1123	1	276	SnSN1_scaffold01547	717	487	3	233
594	623	7	35	3557	3524	6	38									169532	169467	1	67					
5141	5034	93	200	6164	6211	238	285	U^	354	Contig8315	2186	2539	1	354	KL544069					SnSN1_scaffold01547	451	182	44	313
1996	1921	234	309	1	52	288	339									24962	24634	26	354					
2062	2172	51	161	1170	1304	24	158	V*	161	Contig8315	761	921	1	161	KL544045	675154	675314	1	161	SnSN1_scaffold02197	139	243	54	158

* Denotes seqeunce blocks that part of a cytochrome gene; ^ Denotes sequence block contains rRNA sequences; low evalue: above 1E-07; small match: 14-17 bp

Contig from *N. caninum* genome assembly (ftp://ftp.sanger.ac.uk/pub/pathogens/Neospora/caninum/NEOS.contigs.072303)

NCBI accesion numbers

Scaffold/Contig from t oxodb.org version 44 (tblastx used for sequence blocks that are part of a gene to identify matches in *S. neurona*)

E. tenella mtDNA sequence AB564272.1 (tblastx used for sequence blocks that are part of a CDS)

P. falciparum mtDNA sequence M76611.1 (tblastx used for sequence blocks that are part of a CDS)

N. canium : Best matches were mostly to Contig8315

Hammondia: The latest genome assembly in Toxodb.org and NCBI were searched and the better of the two hits are reported. The NCBI matches are to reported gene sequences

For *N. caninum* and *Hammondia* only blastn results are reported

Table S2 - BLAST comparison of *T. gondii* mtDNA to other species
(see page above)

Table S3 – Summary of Nanopore and Illumina sequences generated

***T. gondii* ME49 Nanopore statistics**						
	Genome size	**# reads**	**Size Range (nt)**	**Total Length (nt)**	**Coverage**	**SRA**
Nuclear reads	67 MB	43,392	48-90,222	313,953,499	4.68 X	SRR9200762
mtDNA reads	5,909 (minimum)	269	320-23,619	699,177		

***T. gondii* RH *Δuprt* Nanopore statistics**						
	Genome size	**# reads**	**Size Range (nt)**	**Total Length (nt)**	**Coverage**	**SRA**
Nuclear reads	67 MB	765,200	56-94,214	4,309,669,177	64.32 X	SRR9961591
mtDNA reads	5,909 (minimum)	779	101-15,914	1,985,929		

***N. caninum* Nc-1 Nanopore statistics**						
	Genome size	**# reads**	**Size Range (nt)**	**Total Length (nt)**	**Coverage**	**SRA**
Nuclear reads	60 MB	8748	45-51,875	17,024,894	0.284X	SRR9200761
mtDNA reads	5,908 (minimum)	117	381-16,547	328,111		

***T. gondii* ME49 Illumina (PE-150) statistics**						
	Genome size	**# reads**		**Total Length (nt)**	**Coverage**	**SRA**
Total DNA reads	67 MB	327,219,513		98,400,570,288	1,468 X	SRR6793863

Table S4 - Evidence of *T. gondii* and *N. caninum* Sanger genomic and EST reads Encoding Partial cytochromes genes

Toxoplasma gondii

Gene	Sequence blocks in EST read	GenBank Accession ID of EST	Trace Archive ID of a genomic read aligning with the EST read
coxI	A, T, V.D	CN617107.1	ti:2057042422
	C, Q, J, L, V, S	DK934897.1	ti:2056951560
	V, S, R, F	CV701032.1	ti:2057358855
coxIII	V, L, J, B, M	CV654565.1	ti:2057374420
	B, M	DV110375.1	ti:2064971134
cob	A, T, V	CV653007.1	ti:2057140800
	A, T, E	DV109376.1	ti:2057357849
	E, A	CB384005.1	ti:2057332917
	K, O, J, E	CB752279.1	ti:2057396732

T. gondii EST reads encoding portions of cytochromes and mtDNA SBs

Neospora caninum

Gene	Sequence blocks in EST read	GenBank Accession ID of EST	Trace Archive ID of a genomic read aligning with the EST read
coxI	K, O, J, Q, C	CF275126.1	ti:2158337065
	Q, J, L, V, S	CF937985.1	ti:2158436519
	C, S, V, L	CA857116.1	ti:2158472021
	V, S, R, F, N	CD537742.1	ti:2158469753
coxIII	Q, J, L, V, S	CF937985.1	ti:2158436519
	V, L, J, B, M	CF620007.1	ti:2222083982
	O, J, B, M	CF423132.1	ti:2158457520
cob	T, A, N	CF940825.1	ti:2158465069
	E, A, T	CF967503.1	ti:2158382251
	E, A	BF716988.1	ti:2158435877

Table S5 - Annotation of mtDNA-specific *T. gondii* PRU RNA nanopore reads using the 21 sequence blocks. Red= *coxI;* Green = *coxIII*; Blue = *cob* and Yellow indicates an anomaly in the SB. Red text = reverse orientation. * Full-length cytochrome transcript; # Transcript at > 90% of gene length due to missing ends. Corrected sequences are available in Supplementary Dataset S6. Examination of the three detected polyadenylated *coxI* transcripts showed that following the poly(A) stretch there is addition of apparently random sequence and in one transcript this random sequence is followed by another poly(A) tail.

TgNano_RNA_names	Tg_nanopore_RNAseq	Length	Annotation	Poly A
TgNano_RNA1	e9333c9e-4041-4114-80bb-92524fcf2396	2880	I K K O J B Mp U Kp I P A E	
TgNano_RNA2	023b1824-1bb4-4b96-9cda-63bdc8581de2	2339	I P A N Fp R S V L B Mp U Kp	
TgNano_RNA3	968cba32-4c68-45df-abb3-2b2f4098deda	2010	U Mp B J L S C Q J	
TgNano_RNA4	4f149e5c-bbad-4179-87c9-ecb0a93716f6	1876	N A T V D Kp U Mp B J O K	
TgNano_RNA5	abeed298-7200-4999-ad78-56b85af0ac06	1729	C S V L J	
TgNano_RNA6	d7b561c2-da97-4eb2-8cd1-3eda76e8a39a	1701	M B J L V S R F	
TgNano_RNA7	5a8e1300-fa98-431a-8b43-69b9123c029e	1671	S V L J E A	
TgNano_RNA8	118c73fe-4caf-44c8-a547-1238d541b903[#]	1616	**V S C Q**	A
TgNano_RNA9	a20cf716-5019-4803-a284-44d719afd29e	1616	C Q J L S C C	
TgNano_RNA10	c566d00b-5be0-41a0-8e86-9de1ece7d3c1[#]	1615	O J **E A T**	B
TgNano_RNA11	7b66ffd3-a547-4dea-a733-26f681496e2c	1570	S C Q J	
TgNano_RNA12	f6f4b33c-60e7-4f18-9f62-a9730d16cce1*	1567	**V S C Q** J	No
TgNano_RNA13	82ef02fe-dbbc-48a8-b84f-15f3ee08aa52	1563	M B J O K I P	
TgNano_RNA14	b500a94f-b453-41c9-bd3e-5775b5fd67de	1563	V S C	
TgNano_RNA15	dda06ce5-a22c-4f08-8c1f-85d41848f90a[#]	1527	**V S C Q** J	No
TgNano_RNA16	ce147cce-b308-4c26-a39c-33a35343a8dc[#]	1523	**V S C Q**	C
TgNano_RNA17	d95c47c8-8409-491d-ab87-371a58f70548[#]	1518	**V S C Q**	
TgNano_RNA18	eb151d53-ef7e-42b0-a038-c704b77d4a81[#]	1511	**V S C Q**	D
TgNano_RNA19	71371d1f-b682-4c97-a289-6718182d0198	1503	C S V L J B	
TgNano_RNA20	7bb0da96-0483-4825-be30-24d67df50108	1503	C S V T A	
TgNano_RNA21	d5365e75-ab6d-4dfb-8936-58d5142ba9f7[#]	1496	**V S C Q**	E
TgNano_RNA22	9c45e8cb-0881-449e-905e-d49b4b447297[#]	1493	K J **E A T**	F
TgNano_RNA23	a75c227b-9708-4aa9-b71f-46e8df45dd7b	1465	U Kp D V L J E A	
TgNano_RNA24	d9cee345-5ec7-4652-85b5-d58cb2e1c300	1461	H P A N Fp R S V	
TgNano_RNA25	a1f14a9d-7c60-4779-8154-e2d15ca6c920	1452	Kp I P A E	
TgNano_RNA26	fc6a6310-d3a3-4edc-be55-e2976f642a31*	1449	O K D **V L J B M**	No
TgNano_RNA27	9508b00a-f738-481e-a014-723378e57b90	1376	C S V L M	
TgNano_RNA28	1b6f35e2-9a58-4885-8821-fb90e13fe21c[#]	1374	K D **V L J B M**	G
TgNano_RNA29	cf4c1453-4a29-41af-b2f5-e57c0150ebae*	1356	O J **E A T**	
TgNano_RNA30	b844257b-7e20-4fff-a423-0863f9c25b99	1344	S C Q	

A -After TAA - **CACAATAGAACT**AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATCCCTCCATCCATCTACTCTCATTCCATCATCTCAACTATTTCCATTTATTTCCTTTTCCTCTTCATTCCTAACCTACCATTCCCTCATCAAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACCAG

B - Sequence block T not till *cob* end

C -After TAA - **CACAATAGAACT**AAAAAAAAAAAACCCATCCCACATCTCATCACTCCCTTATCATCACTTATTAACTTCCATTTCAACCAACCCTACAACCTCAAATCCCACA

D - Ends 11 nt early, then TAGATCGGAAGAGCACACGTCTGAACTCCAGTCCTTACCCAACTTTCTCATAAACATAAATCTATATCAACCTGCCCTATCCTTAGAATCCCAACT

E - After TAA - CACAATAGAACTAAAAAAAAAAAAAACCCACCCTCATCCCATACTTTGCAATGCCTATATCTATCCCTAGATA

F - Sequence block T not complete to *cob* end

G - Sequence block M not complete to end of *coxIII*

Table S6 - Examples of *T. gondii* DNA Nanopore reads with anomalies in sequence blocks.

T. gondii Nanopore Read ID	Annotation of Sequence Blocks
e32f2dad-4608-49ff-b62e-379af84de712	U Kp I P A E J L V D K O J Q H P A E T V S R F O J B M
4f9137f3-d610-44a1-ad50-da462668413d	U Mp B J L V D K J Q H P A E J O F M
fadfacb2-e251-4149-bc9f-c297168a76b2	S R F F M B J O F M M B J O K D
2b941d62-dffb-41f4-bd3a-74d872421b0f	V L J Q H P A E J L V S R F O J B Mp U Kp D V L J B Mp U
c61269fa-fa08-4679-8983-f1a01a1635e4	F O J E A P H Q J L V D Kp U M B J L Q C S V J L
734acb5d-d7a7-4299-a6db-1032095a98d6	Q H P A N Fp M B J O K D V L J B M U Kp D V L J Q C S V

Regions with anomalies are highlighted in yellow Red text = reverse orientation. These are a subset of reads shown in Supplemental Fig. S4.

Table S7 - Number of full-length protein encoding genes detected in the ONT reads

	Mitochondrial Nanopore reads	*cob* detected	*coxI* detected	*coxIII* detected	Full-length *cob, coxI coxIII* not detected in read
TgME49 DNA	269	23	22	26	218
TgRH DNA	779	52	57	103	596
Tg PRU RNA	30	3*	7*	2*	18*
Nc Nc-1 DNA	117	2	3	7	86

*RNA ONT read numbers 95% length. See Supplemental Table S5 for details.

Table S8 – BLAST results of search of full-length protein encoding genes in ONT reads

Yellow highlight indicates incomplete genes. Only hits above 95% length are shown. Searches are of corrected ONT reads available in the Supplemental Dataset files.

SAMPLE	Gene_ID	ONT Read_ID	Pct identity	Aln length	Mis matches	gaps	Gene_ start_ aln pos	Gene End aln pos	Read Start Aln pos	Read End Aln pos	e-val ue	Bit score
TgME49	COB	f74c036a-dec6-4250-8996-93a68701021b	100	1107	0	0	1	1107	2537	3643	0	2194
TgME49	COB	97171c23-3db9-4af4-9926-c00a253bfcf8	100	1107	0	0	1	1107	4046	2940	0	2194
TgME49	COB	97171c23-3db9-4af4-9926-c00a253bfcf8	99.91	1107	1	0	1	1107	6284	7390	0	2187
TgME49	COB	e4fcae18-2534-449c-ad80-5de928ff6146	99.91	1107	1	0	1	1107	87	1193	0	2187
TgME49	COB	188f54cf-e93c-47f4-beb9-79cf2224e25c	99.91	1107	1	0	1	1107	10655	9549	0	2187
TgME49	COB	85f489d4-c46d-413b-b6b9-f7a9bf8bda12	99.91	1107	1	0	1	1107	2384	1278	0	2187
TgME49	COB	80e16e15-e446-4e7a-8f3d-6bf9804672ae	99.91	1107	1	0	1	1107	10410	11516	0	2187
TgME49	COB	80e16e15-e446-4e7a-8f3d-6bf9804672ae	99.91	1107	1	0	1	1107	18503	17397	0	2187
TgME49	COB	80e16e15-e446-4e7a-8f3d-6bf9804672ae	99.82	1107	2	0	1	1107	1330	2436	0	2179
TgME49	COB	0d0d37ef-be92-43f4-83f6-f7099585641c	99.91	1105	1	0	1	1105	1793	2897	0	2183
TgME49	COB	ad9d243a-deef-4fa1-bef3-3734df6b0b3a	100	1099	0	0	1	1099	1099	1	0	2179
TgME49	COB	2334281a-0fd8-4c87-9478-cdbdc8366b3c	99.82	1107	2	0	1	1107	1825	719	0	2179
TgME49	COB	50a5090a-60db-4dda-8740-9ff7097a9e83	99.82	1107	2	0	1	1107	7518	8624	0	2179
TgME49	COB	3e490cf6-dd1c-44d2-b39c-d2c7eed3a18e	99.82	1107	2	0	1	1107	1890	2996	0	2179
TgME49	COB	cb691aab-c97f-4d85-862c-80a9a7c1c05f	99.73	1107	3	0	1	1107	5976	7082	0	2171
TgME49	COB	4d2b3378-31ae-417d-84ea-cfe8d15839c5	99.73	1107	3	0	1	1107	1936	830	0	2171
TgME49	COB	f2ad2f07-9199-4ca3-a5bc-a5d2ccdf41b2	99.73	1107	1	1	1	1107	264	1368	0	2165
TgME49	COB	42c71dbb-a80b-4582-b29b-66f568e54f02	99.73	1108	2	1	1	1107	7712	6605	0	2165
TgME49	COB	7c303a55-2cb6-43dd-8d2c-38698a879fcb	99.73	1108	2	1	1	1107	1874	767	0	2165
TgME49	COB	e5e52891-9720-47ec-9eb4-451adfe536c4	99.64	1107	2	2	1	1107	5502	4398	0	2147
TgME49	COB	f3772ab8-ad3c-4a45-90f4-41f8baf081ca	99.55	1107	0	2	1	1107	2696	3797	0	2145
TgME49	COB	06256e18-2183-46cd-b9b6-e7379f38c079	99.46	1107	3	1	1	1107	3317	2214	0	2143
TgME49	COB	06256e18-2183-46cd-b9b6-e7379f38c079	99.19	1107	1	2	1	1107	1362	264	0	2119
TgME49	COB	09d6f4a1-4c78-4aa5-aa9d-bcbfc0bfeddf	99.37	1107	0	1	1	1107	5235	4136	0	2143
TgME49	COB	825a3220-753e-4494-8962-730082994fa6	98.1	1107	3	2	1	1107	1733	645	0	2044
TgME49	COXIII	e5e52891-9720-47ec-9eb4-451adfe536c4	99.86	735	1	0	1	735	2019	1285	0	1449
TgME49	COXIII	e5e52891-9720-47ec-9eb4-451adfe536c4	99.86	735	1	0	1	735	6962	6228	0	1449
TgME49	COXIII	e0f8b1c5-1311-4f1b-9cc0-6f2d74d3eaeb	99.86	735	1	0	1	735	3491	2757	0	1449
TgME49	COXIII	cebf1af9-05be-4956-a6c1-6d9b6f5abb1e	99.86	735	1	0	1	735	873	1607	0	1449
TgME49	COXIII	bfdeae82-dff5-43b4-b161-534f47e8ab97	99.86	735	1	0	1	735	1260	1994	0	1449
TgME49	COXIII	9150e675-890e-40ab-b24d-db9db35a7a20	99.86	735	1	0	1	735	4980	5714	0	1449

TgME49	COXIII	9150e675-890e-40ab-b24d-db9db35a7a20	99.73	735	2	0	1	735	1159	425	0	1441
TgME49	COXIII	80e16e15-e446-4e7a-8f3d-6bf9804672ae	99.86	735	1	0	1	735	5890	5156	0	1449
TgME49	COXIII	80e16e15-e446-4e7a-8f3d-6bf9804672ae	99.45	733	1	1	3	735	21060	20331	0	1417
TgME49	COXIII	57b25780-5da3-489c-a075-0a1cbe13b8af	99.86	735	1	0	1	735	1117	1851	0	1449
TgME49	COXIII	50a5090a-60db-4dda-8740-9ff7097a9e83	99.86	735	1	0	1	735	3405	4139	0	1449
TgME49	COXIII	42c71dbb-a80b-4582-b29b-66f568e54f02	99.86	735	1	0	1	735	2646	1912	0	1449
TgME49	COXIII	551bcaa6-78a6-4b11-8cc1-d28b1072aea4	99.86	733	1	0	3	735	5694	4962	0	1445
TgME49	COXIII	7876e473-7148-414d-8ff1-e6fb270b1582	99.86	736	0	1	1	735	2490	1755	0	1443
TgME49	COXIII	7876e473-7148-414d-8ff1-e6fb270b1582	99.73	735	2	0	1	735	6625	5891	0	1441
TgME49	COXIII	fa2a050a-c6d6-40d4-b3a5-ad0a3ad85c31	99.73	735	2	0	1	735	1282	2016	0	1441
TgME49	COXIII	f5667c9e-35cd-40b6-86fa-5edbd37ce2ae	99.73	735	2	0	1	735	1742	1008	0	1441
TgME49	COXIII	e613ab53-3b6b-4c22-8d5a-057801b31fd1	99.73	735	2	0	1	735	6231	5497	0	1441
TgME49	COXIII	af052a68-4538-45e3-9161-595ba33f000d	99.73	735	2	0	1	735	1868	1134	0	1441
TgME49	COXIII	a5c59c21-daaa-40e3-9f50-7f39e3b035f7	99.73	735	2	0	1	735	3109	2375	0	1441
TgME49	COXIII	06256e18-2183-46cd-b9b6-e7379f38c079	99.73	735	2	0	1	735	4780	4046	0	1441
TgME49	COXIII	9fade8e8-9bc2-41bb-8af4-0449ee8d2fc0	99.73	735	2	0	1	735	6446	5712	0	1441
TgME49	COXIII	9a4ed4f8-1583-4a50-850b-2a25075a170b	99.86	735	0	1	1	735	102	835	0	1441
TgME49	COXIII	764d0841-496a-4a26-9caf-75d7c0922ac9	99.59	735	3	0	1	735	2816	3550	0	1433
TgME49	COXIII	188f54cf-e93c-47f4-beb9-79cf2224e25c	99.73	735	1	1	1	735	7193	7926	0	1433
TgME49	COXIII	cb691aab-c97f-4d85-862c-80a9a7c1c05f	99.59	735	1	1	1	735	5245	4513	0	1427
TgME49	COXIII	ff0c07d2-b1a0-4b18-9ef3-fe4b1a963ac4	99.46	735	1	1	1	735	1644	913	0	1421
TgME49	COXIII	fc2f9aaf-fef5-4d97-aef4-dd91dc3e343f	99.18	735	1	2	1	735	5830	5101	0	1400
TgME49	COXI	a2ea3fbc-1597-4da7-940f-ec6c7de5ad7c	99.93	1476	1	0	1	1476	4126	2651	0	2918
TgME49	COXI	445ac7c0-953a-4003-aa0c-9ff0a24ec9bb	99.93	1476	1	0	1	1476	3459	4934	0	2918
TgME49	COXI	24865e47-d2e3-4e1f-9d13-49aade1c7c4d	99.86	1476	2	0	1	1476	2164	689	0	2910
TgME49	COXI	80e16e15-e446-4e7a-8f3d-6bf9804672ae	99.86	1476	2	0	1	1476	13934	15409	0	2910
TgME49	COXI	80e16e15-e446-4e7a-8f3d-6bf9804672ae	99.66	1476	5	0	1	1476	20997	22472	0	2886
TgME49	COXI	49c4f7d2-988c-4462-9ced-87f7b62e2a50	99.86	1476	2	0	1	1476	2978	1503	0	2910
TgME49	COXI	9fade8e8-9bc2-41bb-8af4-0449ee8d2fc0	99.86	1476	2	0	1	1476	3507	2032	0	2910
TgME49	COXI	c61269fa-fa08-4679-8983-f1a01a1635e4	99.86	1476	0	1	1	1476	3203	4676	0	2904
TgME49	COXI	551bcaa6-78a6-4b11-8cc1-d28b1072aea4	99.86	1477	1	1	1	1476	2112	636	0	2904
TgME49	COXI	b10d694f-e4cb-48a3-b03c-de393e3cb503	99.8	1476	3	0	1	1476	548	2023	0	2902
TgME49	COXI	a5c59c21-daaa-40e3-9f50-7f39e3b035f7	99.8	1477	2	1	1	1476	3044	4520	0	2896

TgME49	COXI	42c71dbb-a80b-4582-b29b-66f568e54f02	99.8	1477	2	1	1	1476	6553	5077	0	2896
TgME49	COXI	fc2f9aaf-fef5-4d97-aef4-dd91dc3e343f	99.8	1476	2	1	1	1476	1883	409	0	2894
TgME49	COXI	4a67917f-40b9-4069-9a10-a3d0b14177fd	99.73	1476	4	0	1	1476	1323	2798	0	2894
TgME49	COXI	b3d2107e-0616-46be-b947-38d3082968d1	99.73	1476	1	1	1	1476	1502	30	0	2890
TgME49	COXI	af052a68-4538-45e3-9161-595ba33f000d	99.66	1476	5	0	1	1476	1803	3278	0	2886
TgME49	COXI	57b25780-5da3-489c-a075-0a1cbe13b8af	99.8	1477	0	3	1	1476	4050	2576	0	2880
TgME49	COXI	016a679e-5a8d-446c-9dce-f816174ab6c4	99.73	1477	1	3	1	1476	3669	2195	0	2872
TgME49	COXI	b077641f-e402-45f5-851e-acb894ac1e70	99.59	1476	5	1	1	1476	3355	4829	0	2870
TgME49	COXI	09d6f4a1-4c78-4aa5-aa9d-bcbfc0bfeddf	99.53	1478	3	2	1	1476	1813	3288	0	2863
TgME49	COXI	09d6f4a1-4c78-4aa5-aa9d-bcbfc0bfeddf	99.46	1476	2	2	1	1476	5490	6959	0	2855
TgME49	COXI	d6886c9d-97d9-47ef-89cb-d5bc959238eb	99.46	1476	5	1	1	1476	3886	2414	0	2859
TgME49	COXI	0da48e46-50bc-4a33-b05f-edbfc3410d32	100	1406	0	0	1	1406	1414	9	0	2787
TgME49	COXI	734acb5d-d7a7-4299-a6db-1032095a98d6	99.44	1439	3	4	40	1476	5613	4178	0	2759
TgRH	COXI	c33ef7e5-3399-427f-bc87-cc9064444cf6	100	1476	0	0	1	1476	2558	4033	0	2926
TgRH	COXI	9766de09-f6ca-442d-99cf-7847bb0ea57d	100	1476	0	0	1	1476	1843	368	0	2926
TgRH	COXI	9c86c677-c1a0-485e-af20-180e15767de5	100	1476	0	0	1	1476	4640	6115	0	2926
TgRH	COXI	6a763864-03e0-40b7-8ba4-4a8083968141	100	1476	0	0	1	1476	7556	9031	0	2926
TgRH	COXI	6a763864-03e0-40b7-8ba4-4a8083968141	99.93	1476	1	0	1	1476	5831	7306	0	2918
TgRH	COXI	6a80d1b0-2d5c-48b0-b090-c72efe27beca	100	1476	0	0	1	1476	2358	883	0	2926
TgRH	COXI	00da6bb4-dd1c-4e47-a9bd-e76484db2e67	100	1476	0	0	1	1476	4432	5907	0	2926
TgRH	COXI	68804d07-5250-48c0-b40d-81259b748a83	99.93	1476	1	0	1	1476	4373	5848	0	2918
TgRH	COXI	68804d07-5250-48c0-b40d-81259b748a83	99.86	1451	1	1	1	1450	1459	9	0	2853
TgRH	COXI	8259c953-172c-4357-80e2-dd6618069e02	99.93	1476	1	0	1	1476	948	2423	0	2918
TgRH	COXI	827e707f-176b-4b5e-973a-e63633863eb3	99.93	1476	1	0	1	1476	1766	291	0	2918
TgRH	COXI	827e707f-176b-4b5e-973a-e63633863eb3	99.86	1476	1	1	1	1476	3535	5009	0	2902
TgRH	COXI	082f3e25-0009-475b-bd45-51e4c7c5d814	99.93	1476	1	0	1	1476	2698	4173	0	2918
TgRH	COXI	082f3e25-0009-475b-bd45-51e4c7c5d814	99.73	1476	0	2	1	1476	1023	2494	0	2882
TgRH	COXI	082f3e25-0009-475b-bd45-51e4c7c5d814	99.72	1437	0	1	1	1437	4424	5856	0	2815
TgRH	COXI	0d383f2d-f220-4da4-8e15-6c0d34e80f4b	99.93	1477	0	1	1	1476	3638	2162	0	2912
TgRH	COXI	0d383f2d-f220-4da4-8e15-6c0d34e80f4b	99.73	1471	1	2	1	1470	1914	446	0	2870
TgRH	COXI	35a13e75-89da-4276-b74d-915d4599c993	99.93	1476	0	1	1	1476	3175	4649	0	2910
TgRH	COXI	2f14ac04-9b06-4f67-bc97-a18c3876a4ec	99.93	1476	0	1	1	1476	1187	2661	0	2910
TgRH	COXI	266c261b-82eb-4d01-b50d-a34a7866be68	99.86	1476	0	1	1	1476	2970	1497	0	2904

TgRH	COXI	8b6c6fac-af28-4ea9-9195-dc813c35670a	99.8	1476	3	0	1	1476	5598	7073	0	2902
TgRH	COXI	79579621-ec2f-454c-9b8f-d2234a473f55	99.8	1476	1	1	1	1476	583	2056	0	2896
TgRH	COXI	73432a1b-fee9-4a85-8e25-67f191bac15c	99.8	1477	2	1	1	1476	2146	670	0	2896
TgRH	COXI	573dee76-6b48-4ede-8e99-4968a3d59605	99.86	1476	0	2	1	1476	7214	5741	0	2894
TgRH	COXI	54207d47-4ac7-4af8-9c4d-dcebc9a07a39	99.73	1476	0	1	1	1476	3332	4803	0	2892
TgRH	COXI	82df7513-562f-4ba8-860f-91b855e2c47d	99.73	1476	0	1	1	1476	4829	3358	0	2892
TgRH	COXI	5bbbff09-28fc-4a53-9c82-1f0faa3d349a	99.73	1476	1	1	1	1476	1172	2644	0	2890
TgRH	COXI	db0ee806-497c-4a6e-9f5a-87873320590f	99.8	1477	1	2	1	1476	3422	4897	0	2888
TgRH	COXI	023e4992-e2f6-4e9e-96b2-030dc07a7298	99.73	1477	3	1	1	1476	6819	5343	0	2888
TgRH	COXI	f9e5708d-841d-4611-a69a-4eef151fd455	99.73	1476	1	2	1	1476	1747	275	0	2880
TgRH	COXI	ce8757c5-91e2-4b67-8dcb-56d3bc5074a2	99.8	1477	0	3	1	1476	2948	1474	0	2880
TgRH	COXI	fc2083c0-3516-4333-81d1-4702bfe4c96d	99.73	1476	2	2	1	1476	2354	3827	0	2878
TgRH	COXI	e7acdd1b-c095-47b1-a0a8-fc60434512f8	100	1450	0	0	27	1476	1	1450	0	2874
TgRH	COXI	403c1688-dfd7-409f-a120-e3cfbe015f2a	99.66	1476	1	2	1	1476	6369	4898	0	2874
TgRH	COXI	b2f906ac-8af2-4467-bd46-dd1d2de3a3bf	99.66	1476	3	2	1	1476	2910	1437	0	2870
TgRH	COXI	56a0b5f1-288d-4513-89cc-513dffb4789b	99.66	1476	3	2	1	1476	96	1569	0	2870
TgRH	COXI	3dfd72ba-097c-4b29-a9f2-a9a7b5c9494f	99.66	1476	3	2	1	1476	3133	1660	0	2870
TgRH	COXI	b75ea9d7-0dcd-45ca-839b-fac5a081f77c	99.66	1477	0	3	1	1476	4091	2619	0	2868
TgRH	COXI	8080b269-9310-4a36-8620-040012caa27d	99.53	1476	0	2	1	1476	1926	458	0	2864
TgRH	COXI	b1a06a94-a348-40fe-a256-1fb47a81977c	99.53	1476	3	2	1	1476	4341	5812	0	2859
TgRH	COXI	ada3d93d-e5ac-4177-96e7-7612c0cb26c8	99.59	1476	2	3	1	1476	1346	2817	0	2857
TgRH	COXI	61e4a525-c151-4327-a05a-b21a2df453ac	99.39	1478	7	1	1	1476	2130	653	0	2853
TgRH	COXI	759dcb46-2a04-45ba-8ee3-4365e9799d43	99.79	1449	3	0	1	1449	3545	4993	0	2849
TgRH	COXI	eb862b8a-31a5-40bd-9b41-73b4eb7e5558	99.52	1473	2	3	1	1471	5767	7236	0	2845
TgRH	COXI	eb862b8a-31a5-40bd-9b41-73b4eb7e5558	96.83	1483	30	10	1	1476	2149	677	0	2502
TgRH	COXI	f953c993-8ff1-400b-a1ac-d86dc8a0314b	99.19	1479	7	2	1	1476	2673	1197	0	2827
TgRH	COXI	89ec7e05-0343-4c95-8442-802e4a73cb04	99.39	1476	3	4	1	1476	727	2196	0	2827
TgRH	COXI	70854b83-c369-4036-9174-8b15d84be384	99.45	1450	8	0	27	1476	1484	35	0	2811
TgRH	COXI	5605ba66-9c85-4198-891e-ea887d19f438	99.45	1450	2	2	27	1476	13	1456	0	2803
TgRH	COXI	06bdb1d1-7220-4970-88dd-ee0b3f570a7b	98.98	1476	5	3	1	1476	13710	15175	0	2797
TgRH	COXI	610f791a-217b-4db2-9155-48ecb238d9cd	98.92	1476	13	1	1	1476	3392	1920	0	2795
TgRH	COXI	3af749fa-ff54-4d70-a921-8ff4ce8c4511	98.92	1478	11	2	1	1476	299	1773	0	2793
TgRH	COXI	988afa86-81cd-47e7-9d99-b6206d0c1ca1	98.92	1476	9	4	1	1476	1984	516	0	2773

TgRH	COXI	2c4e01a4-a276-4dd4-9c7b-e54277608e88	98.92	1476	2	6	1	1476	4397	2936	0	2767
TgRH	COXI	2207c44e-5e5d-4529-a392-b7df1a232e6b	98.78	1476	13	3	1	1476	3309	1839	0	2763
TgRH	COXI	1db17307-8d17-4277-89bb-5ba9ff403f7d	98.65	1483	9	4	1	1476	871	2349	0	2763
TgRH	COXI	a7e597d8-b1ff-43d3-9725-67212c8792a2	98.97	1462	6	4	1	1456	1783	3241	0	2757
TgRH	COXI	3b065293-8cfe-4a0d-bb46-33a1898f1a56	98.71	1477	13	4	1	1476	4917	6388	0	2750
TgRH	COXI	e8ea8e70-6816-45db-9825-97751a1cfb97	98.58	1476	8	4	1	1476	1840	378	0	2746
TgRH	COXI	1404e4ea-7675-4bb8-b009-e6b3b28e2a89	98.51	1476	19	2	1	1476	3055	4527	0	2738
TgRH	COXI	4a7b4160-8906-4f5d-ba01-aba087813097	99.57	1404	1	3	1	1403	808	2207	0	2716
TgRH	COXI	04462812-3cfe-4852-bdd6-eb0fde379311	99.15	1413	11	1	1	1413	6814	8225	0	2698
TgRH	COXI	04462812-3cfe-4852-bdd6-eb0fde379311	96.56	1481	27	10	1	1476	239	1700	0	2480
TgRH	COXI	c3284243-05d1-4322-8ee0-39a732fdbb61	97.83	1478	8	3	1	1476	3159	4614	0	2694
TgRH	COXI	6f80b2d8-5381-499f-8c77-c2ec9908fef0	97.63	1478	9	4	1	1476	4336	2883	0	2664
TgRH	COXI	f7c6a6c4-9fc5-4863-bbeb-8327b7ae5e14	97.77	1479	9	7	1	1476	1005	2462	0	2648
TgRH	COXI	db5346a2-8205-4395-825d-9b5aefd83dc5	96.07	1476	15	9	1	1476	8622	7190	0	2462
TgRH	COXI	db5346a2-8205-4395-825d-9b5aefd83dc5	95.63	1486	28	16	1	1476	5110	3652	0	2345
TgRH	COXIII	e16be791-7af5-4595-8c9b-d49bf18d6d6f	100	735	0	0	1	735	1255	1989	0	1457
TgRH	COXIII	c1f67acb-4fd4-405f-8630-2d98d984b068	100	735	0	0	1	735	311	1045	0	1457
TgRH	COXIII	b75ea9d7-0dcd-45ca-839b-fac5a081f77c	100	735	0	0	1	735	1191	457	0	1457
TgRH	COXIII	27918020-97f9-40a2-8b53-3f100fd53828	100	735	0	0	1	735	2378	3112	0	1457
TgRH	COXIII	97983bf3-4be6-41ed-a5ae-d12953586874	100	735	0	0	1	735	304	1038	0	1457
TgRH	COXIII	6520e2ce-924d-4136-bf8f-d8a717b22492	100	735	0	0	1	735	2176	1442	0	1457
TgRH	COXIII	3447b135-65e7-45e2-b0c1-c9809401c86f	100	735	0	0	1	735	1782	1048	0	1457
TgRH	COXIII	02092ecb-cec8-4c14-b76d-3ebd5c3d09a7	100	735	0	0	1	735	2191	1457	0	1457
TgRH	COXIII	934d735c-c936-40d0-8881-5297e16e2a50	100	735	0	0	1	735	1748	1014	0	1457
TgRH	COXIII	908a355a-5dcd-4140-abf5-f869b89dead9	100	735	0	0	1	735	1507	773	0	1457
TgRH	COXIII	260b44e5-59dc-4076-a6cf-9c753ffc3b7e	100	735	0	0	1	735	1006	1740	0	1457
TgRH	COXIII	72ff9cb7-080f-4f67-97b5-1c8ef3bab364	100	735	0	0	1	735	327	1061	0	1457
TgRH	COXIII	35a13e75-89da-4276-b74d-915d4599c993	100	735	0	0	1	735	3240	2506	0	1457
TgRH	COXIII	32a94604-cbc2-4edf-a100-11b51734d85c	100	735	0	0	1	735	1264	1998	0	1457
TgRH	COXIII	19acf3c5-a576-44b4-bed7-8ac5176e94b8	100	735	0	0	1	735	5247	5981	0	1457
TgRH	COXIII	19acf3c5-a576-44b4-bed7-8ac5176e94b8	99.86	735	1	0	1	735	1923	2657	0	1449
TgRH	COXIII	06d1d108-14ab-427e-9dc6-809af4b19d3e	100	735	0	0	1	735	477	1211	0	1457
TgRH	COXIII	06bdb1d1-7220-4970-88dd-ee0b3f570a7b	100	735	0	0	1	735	10035	10769	0	1457

TgRH	COXIII	06bdb1d1-7220-4970-88dd-ee0b3f570a7b	99.73	735	0	1	1	735	4828	5560	0	1435
TgRH	COXIII	06bdb1d1-7220-4970-88dd-ee0b3f570a7b	96.47	736	7	5	1	735	916	1633	0	1241
TgRH	COXIII	2e49a9bc-5e34-42c8-b282-f25b790a14c7	100	735	0	0	1	735	2955	2221	0	1457
TgRH	COXIII	0d6b48f5-75f3-4441-9a39-84cbebf38df7	100	735	0	0	1	735	7119	7853	0	1457
TgRH	COXIII	db0ee806-497c-4a6e-9f5a-87873320590f	99.86	735	1	0	1	735	3487	2753	0	1449
TgRH	COXIII	c1a08c31-54b6-49b8-82c1-259ceb79df2f	99.86	735	1	0	1	735	1502	2236	0	1449
TgRH	COXIII	ba073861-7152-41f5-ac77-e7fc4dadd7b6	99.86	735	1	0	1	735	940	206	0	1449
TgRH	COXIII	a11d8b29-ca6e-40f7-a77f-6c68a2052bf5	99.86	735	1	0	1	735	2033	1299	0	1449
TgRH	COXIII	2851b024-8a17-45f2-b3b2-cea5acdcca03	99.86	735	1	0	1	735	2552	1818	0	1449
TgRH	COXIII	33acaff5-b684-44dc-9f9d-63e8108d465b	99.86	735	1	0	1	735	5111	4377	0	1449
TgRH	COXIII	2f14ac04-9b06-4f67-bc97-a18c3876a4ec	99.86	735	1	0	1	735	5224	4490	0	1449
TgRH	COXIII	2f14ac04-9b06-4f67-bc97-a18c3876a4ec	99.18	728	3	1	8	735	1245	521	0	1392
TgRH	COXIII	a104129b-9b61-4740-9920-39181d17010c	99.86	736	0	1	1	735	2282	1547	0	1443
TgRH	COXIII	2212cb85-9f2b-460d-a3c0-8c050f0be25f	99.86	736	0	1	1	735	1533	2268	0	1443
TgRH	COXIII	1cb11612-fc1e-485a-894c-8d01d210545c	99.86	736	0	1	1	735	1524	789	0	1443
TgRH	COXIII	ed4b3ae8-f73d-489d-8e9b-362662906634	99.86	735	0	1	1	735	453	1186	0	1441
TgRH	COXIII	d88ccf0c-1554-492e-b88e-7246ca8ce296	99.86	735	0	1	1	735	1415	682	0	1441
TgRH	COXIII	cc1e1d57-e8b2-4665-b8e2-a903501c206a	99.86	735	0	1	1	735	3641	2908	0	1441
TgRH	COXIII	ca715540-f2b1-40d4-a3db-8a545494658b	99.73	735	2	0	1	735	1219	1953	0	1441
TgRH	COXIII	aec2966b-2cfc-4c79-ae99-9ba287c6ed6d	99.86	735	0	1	1	735	2060	1327	0	1441
TgRH	COXIII	538dc9a7-fe09-4a03-8e61-392826f1e763	99.86	735	0	1	1	735	2604	3337	0	1441
TgRH	COXIII	64ae575b-2658-4a51-a1aa-60a377e50f89	99.86	735	0	1	1	735	2946	2213	0	1441
TgRH	COXIII	64ae575b-2658-4a51-a1aa-60a377e50f89	98.57	701	7	3	1	701	708	11	0	1287
TgRH	COXIII	8eec2382-639c-4a1c-9a22-789e11bf470a	99.86	735	0	1	1	735	1165	1898	0	1441
TgRH	COXIII	00da6bb4-dd1c-4e47-a9bd-e76484db2e67	99.86	735	0	1	1	735	7358	6625	0	1441
TgRH	COXIII	00da6bb4-dd1c-4e47-a9bd-e76484db2e67	96.88	736	14	5	1	735	9960	10687	0	1245
TgRH	COXIII	f953c993-8ff1-400b-a1ac-d86dc8a0314b	99.73	735	0	1	1	735	2608	3340	0	1435
TgRH	COXIII	e7acdd1b-c095-47b1-a0a8-fc60434512f8	99.73	735	0	1	1	735	2172	2904	0	1435
TgRH	COXIII	bbcbbba3-a4e7-42c4-ae84-4b3feda7dd1a	99.73	735	0	1	1	735	1759	1027	0	1435
TgRH	COXIII	b7352188-7498-4393-9b17-dbfb85d21e91	99.73	735	0	1	1	735	5425	6157	0	1435
TgRH	COXIII	7bc4df6a-efb3-4093-a421-54ac5dcddb12	99.73	735	0	1	1	735	2607	3339	0	1435
TgRH	COXIII	5c8a4a47-61c6-41b3-99b4-418b1bfa5b0c	99.73	735	0	1	1	735	9261	9993	0	1435
TgRH	COXIII	3dfd72ba-097c-4b29-a9f2-a9a7b5c9494f	99.73	735	0	1	1	735	3068	3800	0	1435

TgRH	COXIII	0b36f7b8-9161-4783-845a-c5ccfdb27acc	99.73	735	0	1	1	735	484	1216	0	1435
TgRH	COXIII	f111c985-f35c-4046-a687-ed972cd365eb	99.73	735	1	1	1	735	1702	969	0	1433
TgRH	COXIII	db97fb51-99bd-406b-837f-18af8574c08d	99.73	735	1	1	1	735	2808	3541	0	1433
TgRH	COXIII	db97fb51-99bd-406b-837f-18af8574c08d	99.59	735	1	2	1	735	1296	564	0	1417
TgRH	COXIII	61e4a525-c151-4327-a05a-b21a2df453ac	99.73	734	0	1	1	734	2065	2796	0	1433
TgRH	COXIII	7ea5249f-7746-4c98-89bf-bffb521f33f8	99.73	735	1	1	1	735	2712	1979	0	1433
TgRH	COXIII	ffa54b51-3abd-4bbc-9aef-5b83668ae4a3	99.59	735	0	1	1	735	2426	1695	0	1429
TgRH	COXIII	403c1688-dfd7-409f-a120-e3cfbe015f2a	99.73	736	0	2	1	735	1242	1976	0	1427
TgRH	COXIII	03b7af7d-5943-4785-abbe-33c3263ceb79	99.59	735	1	1	1	735	679	1411	0	1427
TgRH	COXIII	a883f2c7-3029-45f4-a344-f9febef09afb	99.73	735	0	2	1	735	140	872	0	1425
TgRH	COXIII	6dae3862-40a1-4a4f-9efb-323b2e471073	99.73	735	0	2	1	735	742	1474	0	1425
TgRH	COXIII	970ea693-e973-44cb-88f1-2d2be13d92a5	99.59	732	0	1	1	732	757	29	0	1423
TgRH	COXIII	ed60cc51-8e90-47b8-acac-46256f1b0e97	99.46	735	1	1	1	735	1080	1811	0	1421
TgRH	COXIII	3c4d410a-73ef-4ca7-b759-befa658bb778	99.46	735	1	1	1	735	1019	1750	0	1421
TgRH	COXIII	ec74eaa9-c9fc-4dc2-8148-68fa035a0290	99.46	735	2	1	1	735	4939	4207	0	1419
TgRH	COXIII	a378d119-1767-4ade-af12-9b696d7c8f56	99.59	735	0	2	1	735	1211	480	0	1419
TgRH	COXIII	8692e066-d018-45d9-b666-ca47712508fd	99.59	735	0	2	1	735	1243	512	0	1419
TgRH	COXIII	f3b09922-b5fa-4e0f-9840-aa4ceb30e77f	99.32	735	5	0	1	735	4508	3774	0	1417
TgRH	COXIII	ca5a15dd-6cca-4dfc-8fcd-c6b57408fbbf	99.46	737	0	2	1	735	959	1693	0	1417
TgRH	COXIII	8b6c6fac-af28-4ea9-9195-dc813c35670a	99.32	735	1	1	1	735	7851	8581	0	1415
TgRH	COXIII	db2de070-0e0a-4886-98c8-d112d2d78ba3	99.46	735	0	2	1	735	870	140	0	1413
TgRH	COXIII	c3f0bb3c-29c7-490a-ba40-4eb68e5563d9	99.46	735	0	2	1	735	179	909	0	1413
TgRH	COXIII	8752da92-2388-4ae2-8d53-04c80f401ec0	99.46	735	0	2	1	735	7058	6328	0	1413
TgRH	COXIII	fca05af8-164b-4f21-a2d5-9beb833012ab	99.46	735	1	2	1	735	2866	2135	0	1411
TgRH	COXIII	d6f9ae01-ed84-4a51-a5ce-4a936c201d80	99.46	735	1	2	1	735	1825	1094	0	1411
TgRH	COXIII	1e9acec2-21a3-43d1-b1af-3c5a2edcfb45	99.46	735	1	2	1	735	1605	2336	0	1411
TgRH	COXIII	769b180a-e5a1-42cf-96d2-3e97530aec00	99.32	735	0	2	1	735	7838	7109	0	1407
TgRH	COXIII	3ea3921a-e001-44f2-b76e-b33642822be1	99.46	736	0	3	1	735	1689	957	0	1405
TgRH	COXIII	d8191125-e362-4edc-afe5-b24ac889ad6d	99.32	735	2	2	1	735	1258	1989	0	1403
TgRH	COXIII	c3284243-05d1-4322-8ee0-39a732fdbb61	99.46	735	0	3	1	735	3222	2492	0	1403
TgRH	COXIII	873dd7b8-c4f4-4bec-93df-0aba24f92ba4	99.46	735	0	3	1	735	774	1504	0	1403
TgRH	COXIII	8a4f01f2-3dd8-4a37-8be5-e7c80e4b0909	99.18	735	0	2	1	735	3323	2595	0	1402
TgRH	COXIII	0d95c6c0-9cc1-4435-af9d-24846f7dd88b	99.32	735	0	3	1	735	779	1508	0	1398

TgRH	COXIII	eb862b8a-31a5-40bd-9b41-73b4eb7e5558	99.05	736	6	1	1	735	4739	4004	0	1396
TgRH	COXIII	a23c039f-cb93-441f-85d1-83cdfefe34e5	99.32	735	2	3	1	735	3177	2446	0	1394
TgRH	COXIII	bd20caba-e68a-44fa-9625-f40e87464e18	98.91	735	5	1	1	735	3417	2686	0	1390
TgRH	COXIII	f95e663b-a63a-4478-b447-f9aa41305f65	99.32	736	1	4	1	735	3891	3159	0	1388
TgRH	COXIII	ff7a0594-2520-4639-8d4d-e1b7d1aad81f	99.05	735	3	3	1	735	3822	4552	0	1380
TgRH	COXIII	65a5ee82-00c9-40c6-aac6-925e3f4e51c0	98.91	735	0	3	1	735	2564	1838	0	1380
TgRH	COXIII	68804d07-5250-48c0-b40d-81259b748a83	98.78	735	6	2	1	735	4438	3707	0	1372
TgRH	COXIII	74f2fc65-8282-44ea-bef4-2b1b0757a9a7	98.78	735	6	2	1	735	3078	3809	0	1372
TgRH	COXIII	c9cf68ee-7c16-4fd8-b3f5-69c809278a0c	98.5	735	1	2	1	735	525	1249	0	1370
TgRH	COXIII	e4bcbb0f-36c8-4c58-990a-82f2f69c27bb	98.37	735	0	2	1	735	1337	615	0	1366
TgRH	COXIII	0fce57b4-e19c-42f1-8a94-eae0bf73c21d	98.78	735	4	3	1	735	4305	3576	0	1366
TgRH	COXIII	827e707f-176b-4b5e-973a-e63633863eb3	98.78	735	1	4	1	735	1701	2427	0	1362
TgRH	COXIII	7d37c4d8-edcc-4ce0-a6f8-8cf82949366f	98.51	736	2	5	1	735	3107	3834	0	1340
TgRH	COXIII	7e88e43d-e16c-4acf-9d7f-cd345dc4dc66	98.1	735	10	3	1	735	3430	2700	0	1324
TgRH	COXIII	65d5faa6-373b-4e63-ad1d-5994a3f11a0d	98.2	721	7	2	1	721	1526	812	0	1318
TgRH	COXIII	cccf45be-8d5d-417f-b28a-0caf9870bbe3	98.1	736	1	6	1	735	8656	7933	0	1314
TgRH	COXIII	cccf45be-8d5d-417f-b28a-0caf9870bbe3	97.69	735	2	6	1	735	132	851	0	1292
TgRH	COXIII	d99bc771-fdfc-450f-88c0-d80d315be124	97.14	735	1	2	1	735	2004	1290	0	1310
TgRH	COXIII	9c86c677-c1a0-485e-af20-180e15767de5	97.56	739	13	3	1	735	10872	10135	0	1302
TgRH	COXIII	979fcb13-6cba-4a61-87c5-e0b88fe8a69a	97.01	735	11	1	1	735	2996	2273	0	1294
TgRH	COXIII	eed1e6fd-43d2-4099-8b2c-5fa1ee1d1f49	96.6	735	0	3	1	735	337	1046	0	1279
TgRH	COXIII	1404e4ea-7675-4bb8-b009-e6b3b28e2a89	97.28	735	15	4	1	735	9537	10266	0	1269
TgRH	COXIII	1169dab7-d246-4a7e-b889-aecba9d7fa1a	96.05	735	4	5	1	735	2623	3332	0	1227
TgRH	COXIII	5bbbff09-28fc-4a53-9c82-1f0faa3d349a	95.11	736	18	6	1	735	1237	519	0	1150
TgRH	COB	f21becc6-eb81-419b-86ea-145c9b3f2cab	100	1107	0	0	1	1107	1486	2592	0	2194
TgRH	COB	3a9f0aef-e8da-4245-ac79-0b080469d6ff	100	1107	0	0	1	1107	2066	960	0	2194
TgRH	COB	3a9f0aef-e8da-4245-ac79-0b080469d6ff	99.01	1110	8	1	1	1107	3179	4288	0	2109
TgRH	COB	9766de09-f6ca-442d-99cf-7847bb0ea57d	99.91	1107	1	0	1	1107	3001	1895	0	2187
TgRH	COB	573dee76-6b48-4ede-8e99-4968a3d59605	99.91	1107	1	0	1	1107	7470	8576	0	2187
TgRH	COB	098fd461-95ef-4808-85cd-31a3f838a403	99.91	1105	1	0	3	1107	1084	2188	0	2183
TgRH	COB	e8ea8e70-6816-45db-9825-97751a1cfb97	99.91	1107	0	1	1	1107	2997	1892	0	2179
TgRH	COB	ba073861-7152-41f5-ac77-e7fc4dadd7b6	99.91	1107	0	1	1	1107	2765	3870	0	2179
TgRH	COB	97bf1a2a-f7db-4564-8392-3efa6298536d	99.82	1107	2	0	1	1107	1165	2271	0	2179

TgRH	COB	8e486ac3-5922-4a75-be3d-9bf5658e9b07	99.91	1107	0	1	1	1107	310	1415	0	2179
TgRH	COB	8cc09e48-930d-413a-b71a-79859cb31121	99.82	1107	2	0	1	1107	581	1687	0	2179
TgRH	COB	74796beb-c674-48f7-bf0f-f468650297c2	99.82	1107	0	1	1	1107	1164	60	0	2173
TgRH	COB	8b6c6fac-af28-4ea9-9195-dc813c35670a	99.82	1107	0	1	1	1107	4442	5546	0	2173
TgRH	COB	f247df05-8086-4124-a096-6da6477bda1c	99.91	1097	1	0	11	1107	1689	2785	0	2167
TgRH	COB	f032e2d5-c370-45f2-9375-1d240491f12e	99.73	1107	0	1	1	1107	1414	311	0	2167
TgRH	COB	39095f83-5f14-47a7-b308-90e1f30ca8cd	99.73	1107	0	1	1	1107	710	1813	0	2167
TgRH	COB	847a20fe-c501-47f9-8f88-437a3de338b3	99.73	1107	0	1	1	1107	2312	1209	0	2167
TgRH	COB	cf4a255e-64a6-422f-b999-6fee13f2725a	99.82	1107	0	2	1	1107	3528	2424	0	2163
TgRH	COB	7f890dbe-608e-4acf-9ac7-6031693c1963	99.73	1107	2	1	1	1107	2461	3566	0	2163
TgRH	COB	6f1fb43f-df1f-4e48-9c45-3fec3a2ef81e	99.82	1107	0	2	1	1107	5944	4840	0	2163
TgRH	COB	f5996c41-01c9-4ca6-a2ac-abdc691cd47b	99.73	1107	0	2	1	1107	3555	2452	0	2157
TgRH	COB	e98477b9-e1c6-43ec-98df-ec8817c3de09	99.64	1107	2	1	1	1107	166	1270	0	2157
TgRH	COB	8752da92-2388-4ae2-8d53-04c80f401ec0	99.73	1107	0	2	1	1107	4458	3355	0	2157
TgRH	COB	1404e4ea-7675-4bb8-b009-e6b3b28e2a89	99.73	1107	0	2	1	1107	1900	3003	0	2157
TgRH	COB	93c3df70-470c-4bcc-a6c4-59bff81c0c19	99.73	1107	0	2	1	1107	1810	707	0	2157
TgRH	COB	44e0fa1e-dc79-4aa1-ac51-c9078ab7a25a	99.55	1107	0	1	1	1107	2006	905	0	2155
TgRH	COB	b410f394-b510-4249-aaf5-8eec103bdced	99.55	1107	1	1	1	1107	4643	5745	0	2153
TgRH	COB	769b180a-e5a1-42cf-96d2-3e97530aec00	99.64	1107	0	2	1	1107	753	1855	0	2151
TgRH	COB	06d1a6ef-4c6b-4380-bb6c-d1e072d26d05	99.73	1108	0	3	1	1107	906	2011	0	2149
TgRH	COB	73348418-8da1-4c10-b323-952a4f774324	99.46	1107	6	0	1	1107	2096	990	0	2147
TgRH	COB	5edc6608-8124-4faf-8b8e-4a3cdb2052c6	99.46	1107	1	1	1	1107	1212	111	0	2147
TgRH	COB	dcac84fe-6614-4dcc-b634-663280b25d6f	99.55	1107	0	2	1	1107	6269	7370	0	2145
TgRH	COB	794b27f2-7ff7-4060-aba0-5912aaa7970f	99.46	1107	0	2	1	1107	1347	2447	0	2139
TgRH	COB	3d5b0d4c-e8b0-4155-8edb-8c4fc9b43c8e	99.55	1108	1	3	1	1107	990	2094	0	2135
TgRH	COB	5c8a4a47-61c6-41b3-99b4-418b1bfa5b0c	99.37	1107	0	2	1	1107	2270	3369	0	2133
TgRH	COB	ada3d93d-e5ac-4177-96e7-7612c0cb26c8	99.82	1087	1	1	1	1087	1091	6	0	2131
TgRH	COB	ce8757c5-91e2-4b67-8dcb-56d3bc5074a2	99.28	1109	1	3	1	1107	4299	5402	0	2119
TgRH	COB	9ff5bd73-bc19-4a33-babf-feba91df630f	99.37	1107	2	3	1	1107	2341	1240	0	2119
TgRH	COB	40a4c174-b3dc-4b4f-9d3f-cfc1c44d9053	99.28	1108	4	3	1	1107	608	1712	0	2111
TgRH	COB	00da6bb4-dd1c-4e47-a9bd-e76484db2e67	99.19	1107	1	3	1	1107	3282	4380	0	2109
TgRH	COB	d5270e1a-d12d-4376-bbe8-a5df3a724fd7	99.19	1109	5	3	1	1107	2230	1124	0	2105
TgRH	COB	6ab8a3c3-7e2e-49d5-af5f-a1d95fe4ca3d	99.18	1099	8	1	1	1099	6390	5293	0	2099

TgRH	COB	6ab8a3c3-7e2e-49d5-af5f-a1d95fe4ca3d	94.61	1113	24	7	3	1107	8322	7238	0	1733
TgRH	COB	1acd80c0-2a49-4aa6-ae54-14f82a343523	99.19	1107	2	4	1	1107	1071	2170	0	2097
TgRH	COB	1dd7758e-f329-4198-8102-300fa3bd19bf	99.19	1108	0	5	1	1107	3345	4444	0	2093
TgRH	COB	73432a1b-fee9-4a85-8e25-67f191bac15c	99.01	1107	1	4	1	1107	2401	3497	0	2087
TgRH	COB	7bc4df6a-efb3-4093-a421-54ac5dcddb12	98.74	1107	7	2	1	1107	4062	5161	0	2077
TgRH	COB	79e67614-aa85-497e-a5da-01cc8ec23691	98.64	1107	0	3	1	1107	1192	2283	0	2076
TgRH	COB	14a2c89b-f14e-4948-8393-bd00544747ec	98.64	1107	11	1	1	1107	1231	129	0	2074
TgRH	COB	7982965e-c6df-46e7-a6ec-9f22fc1e8687	99.35	1076	0	2	1	1076	1774	706	0	2072
TgRH	COB	aedbe520-8494-4e81-83bc-1e09751dc378	98.65	1108	11	2	1	1107	4283	3179	0	2066
TgRH	COB	aedbe520-8494-4e81-83bc-1e09751dc378	98.2	1110	17	1	1	1107	6301	5192	0	2038
TgRH	COB	f6172618-c5c7-4fed-b2a3-918ba70da8de	98.55	1107	9	2	1	1107	2356	1257	0	2062
TgRH	COB	da86023d-82c6-4f33-81e5-6d897897a754	98.55	1107	7	5	1	1107	1887	790	0	2036
TgRH	COB	ca00675f-d778-413c-b2e5-ed375e8b587e	98.55	1107	10	5	1	1107	2372	3472	0	2030
TgRH	COB	0d5a6e19-436c-4612-9298-309950b4fe87	98.18	1097	0	3	11	1107	2279	3355	0	2026
TgRH	COB	d9df2a34-82b6-4869-9548-52c3c90ec2ff	97.92	1107	8	4	1	1107	3161	4252	0	2002
TgRH	COB	2167bd3a-a1a6-41d7-835d-a02dec6bcb7c	98.27	1100	13	4	10	1107	3386	2291	0	2002
TgRH	COB	6f80b2d8-5381-499f-8c77-c2ec9908fef0	98.29	1108	7	7	1	1107	7203	8299	0	2000
TgRH	COB	ca068c5d-9429-45e2-860e-6c822cb34435	97.92	1107	1	6	1	1107	1765	681	0	1996
TgRH	COB	8b535238-cfb9-4f12-8b2d-38fa38440841	97.42	1085	16	5	23	1107	191	1263	0	1903
TgRH	COB	0fce57b4-e19c-42f1-8a94-eae0bf73c21d	95.13	1108	39	10	1	1103	2846	1749	0	1699
NcNC-1	COXI	SRR9200761.2796	93	1514	49	43	1	1476	2107	613	0	1848
NcNC-1	COXI	SRR9200761.1091	92.44	1494	42	45	19	1476	7101	5643	0	1760
NcNC-1	COXI	SRR9200761.1091	91.43	1505	53	47	1	1476	5396	3939	0	1645
NcNC-1	COXI	SRR9200761.5931	91.91	1508	55	42	1	1471	1699	222	0	1739
NcNC-1	COXI	SRR9200761.183	92.02	1491	45	47	1	1460	1795	348	0	1693
NcNC-1	COXI	SRR9200761.5297	91.12	1521	62	44	1	1472	1592	3088	0	1653
NcNC-1	COXI	SRR9200761.4919	91.23	1425	62	40	61	1446	2251	851	0	1562
NcNC-1	COXI	SRR9200761.4290	89.59	1527	56	49	1	1476	370	1844	0	1485
NcNC-1	COXI	SRR9200761.4726	90.13	1509	57	56	1	1470	1572	117	0	1437
NcNC-1	COXI	SRR9200761.1441	90.57	1410	57	51	18	1406	2333	979	0	1386
NcNC-1	COXI	SRR9200761.493	89.37	1430	64	48	1	1375	1487	91	0	1328
NcNC-1	COXI	SRR9200761.5696	88.66	1464	51	52	61	1464	3076	4484	0	1298
NcNC-1	COXI	SRR9200761.1425	88.16	1495	76	60	5	1469	145	1568	0	1166
NcNC-1	COXI	SRR9200761.6289	86.35	1524	87	74	13	1460	2019	541	0	878

NcNC-1	COXIII	SRR9200761.912	95.02	743	21	10	1	735	117	851	0	1112
NcNC-1	COXIII	SRR9200761.2579	93.89	753	16	17	5	735	6114	6858	0	1019
NcNC-1	COXIII	SRR9200761.1607	94	750	11	21	1	735	1245	1975	0	989
NcNC-1	COXIII	SRR9200761.693	93.47	750	16	23	1	735	873	1604	0	936
NcNC-1	COXIII	SRR9200761.913	92.65	748	20	22	1	735	1763	2488	0	898
NcNC-1	COXIII	SRR9200761.1279	93.22	737	15	27	22	735	3512	4236	0	866
NcNC-1	COXIII	SRR9200761.1091	92.06	756	13	27	1	735	7053	7782	0	848
NcNC-1	COXIII	SRR9200761.2818	91.24	765	22	31	1	735	5054	5803	0	767
NcNC-1	COXIII	SRR9200761.6288	90.33	755	33	25	1	732	377	1114	0	749
NcNC-1	COXIII	SRR9200761.5297	88.8	768	35	27	1	735	1657	908	0	674
NcNC-1	COXIII	SRR9200761.6024	86.59	738	31	23	35	735	1783	1077	#######	585
NcNC-1	COB	SRR9200761.4196	93.07	1125	23	31	1	1097	635	1732	0	1413
NcNC-1	COB	SRR9200761.4044	92.27	1113	38	30	7	1092	2423	1332	0	1322
NcNC-1	COB	SRR9200761.2712	90.73	1133	38	33	1	1107	1748	2839	0	1219
NcNC-1	COB	SRR9200761.1279	90.97	1074	41	35	1	1058	1561	528	0	1124
NcNC-1	COB	SRR9200761.4476	89.81	1119	59	35	1	1084	2278	1180	0	1076
NcNC-1	COB	SRR9200761.5695	89.31	1151	41	40	1	1107	2452	3564	0	1072
NcNC-1	COB	SRR9200761.2995	90.24	1127	39	45	2	1084	3727	2628	0	1057
NcNC-1	COB	SRR9200761.4726	90.22	1114	32	45	6	1088	2718	1651	0	1051
NcNC-1	COB	SRR9200761.947	88.76	1094	39	42	50	1107	1984	939	0	944
NcNC-1	COB	SRR9200761.2996	88.73	1091	45	43	49	1101	2335	1285	0	916
NcNC-1	COB	SRR9200761.4919	88.73	1118	46	52	32	1104	3445	2363	0	860
NcNC-1	COB	SRR9200761.4002	86.67	1140	70	46	1	1100	2160	1063	0	761

Table S9 - Mapping coverage depth to ascertain relative copy number. To estimate *T. gondii* ME49 relative gene copy numbers we independently mapped genomic Illumina PE data from two different *T. gondii* strains to full-length cytochrome gene sequences and a single-copy nuclear gene, GAPDH. Both ends of a paired read were required to match the target sequence at 100%. The calculated GAPDH coverages were set to equal 1 copy and used to normalize the coverage of *coxI*, *coxIII*, *cob* and a few other often observed SB arrangements. *The SBs A,B,D,E and K,M,V do not occur naturally and were manually constructed as negative controls. Mapping is still detected to the negative controls. Visualization of these mappings (data not shown) revealed paired-end reads mapping within single larger SBs, *e.g.* A, E, K and M and not across them. The exception to this rule was 33 paired-end reads that spanned the SBs K and M. Average coverage for paired-end reads mapping within the adjacent sequence block, M, was over 16,000 reads.

Gene/Arrangement	***T.gondii* ME49 SRR6793863**	***T.gondii* RH-88 SRR521957**	**ME49**	**RH-88**
	Average coverage		**Estimated # of copies**	
gapdh	1195	90	1	1
coxI	377871	33066	316	369
coxIII	505607	46923	423	523
cob	355488	28027	297	313
KOJE	177968	14709	149	164
VSRFOJ	324164	24310	271	271
CQJLVS	237509	17999	199	201
PIKpU	260399	29081	218	324
JLVDK	191764	20383	160	227
JQH	122322	13516	102	151
ABDE (neg control)*	224646	18905	188	211
KMV (neg control)*	180577	16157	151	180

Table S10 – Mean and Median lengths of ONT reads sorted by genome

	TgME49 mtDNA	TgME49 nuclear	TgRH mtDNA	TgRH nuclear	NcNc-1 mtDNA	NcNc-1 nuclear
Mean Length (nt)	2627	7235	2651	5632	2804	1946
Median Length (nt)	1495	4248	1979	4042	1988	603

Table S11 - Annotation of REP elements with *T. gondii* sequence blocks

REP element	GenBank ID	Annotation of the read using the 21 *T. gondii* mtDNA sequence blocks											
REP1	X60240.1	J (48-1)	L	V	S	R	F	O	J (3-48)				
REP2	X60241.1	J (47-1)	L	V	D	Kp	U	Mp	B	J (85-43)			
REP3	X60242.1	J (48-1)	L	V	S	R	Fp	N	A	P	H	Q	J (85-43)

Red font SBs in reverse orientation

Parentheses indicate the base pairs covered on each end (the SBs are incomplete)