

ANEXOS

Anexo 1. Alineamiento de las secuencias obtenidas

10 20 30 40 50 60 70 80 90

581/B/10P TCGCCTCCTATAAGATCCCCGAGTCGGTGGACCTTGTGTTGCTCCCTCCCTTGTGCACCTTCTACAGCTATTGCCGCCAATACCTCGAA
582/B/10P
583/B/10PC.....
566/A/12P .T..TG..C.....T..T.....C..CA..C.....GCC..A.....G..A.....C.....A..C..G..A..
148/B/13PC.....
167/B
178/A/15P .T..TG..C.....T..T.....C..CA..C.....GCC..A.....G..A.....C.....A..C..G..A..
179/A/15P .T..TG..C.....T..T.....C..CA..C.....GCC..A.....G..A.....C.....A..C..G..A..
171/B/16P
176/B/17P
184/B/18P
233/A/19P .T..TG..C.....T..T..T.....C..CA..C.....GCC..A.....G..A.....C.....A..C..G..A..
237/B/19P
4A/B/20P
5/B/21P
5A/B/21P
12/B/22P
16/B/23P
25/B/24P
26/B/25PC.....
26A/B/26PC.....
620/B/9P
621/B/9P
519/B/2P
526/B/2P
521/B/1PC.....
525/B/1P
551/B/3PC.....T.....
563/B/5PC.....
553/A .T..TG..C.....T..T.....C..CA..C.....GCC..A.....G..A.....C.....A..C..G..A..
592/B/6P
593/B/6P
587/B/7PC.....
589/B/7PC.....A.....
101/BC.....T.....

110 120 130 140 150 160 170 180 190

581/B/10P AATAGCAGCACAGAACGTGTATCTGGAGGGGAAACGGTGCATGGACCGGCGAGACAAGCGTCGAGATGCTGCTGGACATGGGCTGAGCCAT
582/B/10P
583/B/10PT.....G.....
566/A/12P G.....G.....T.....C..A.....G..G.....T.....T..T.....T..A.....TT..AG..
148/B/13P
167/B
178/A/15P G.....G.....T.....C..A.....G..G.....T.....T..T.....T..A.....TT..AG..
179/A/15P G.....G.....T.....C..A.....G..G.....T.....T..T.....T..A.....TT..AG..
171/B/16PA.....
176/B/17PA.....
184/B/18PA.....
233/A/19P G.....G.....T.....C..A.....G..G.....T.....T..T.....T..A.....TT..AG..
237/B/19PA.....
4A/B/20PA.....
5/B/21PA.....
5A/B/21PA.....
12/B/22PA.....
16/B/23PA.....
25/B/24PA.....
26/B/25P
26A/B/26P
620/B/9PA.....
621/B/9PA.....
519/B/2P
526/B/2P
521/B/1P
525/B/1PA.....
551/B/3PG.....
563/B/5PA.....
553/A G.....G.....T.....C..A.....G..G.....T.....T..T.....T..A.....TT..AG..
592/B/6P
593/B/6PA.....
587/B/7PC.....

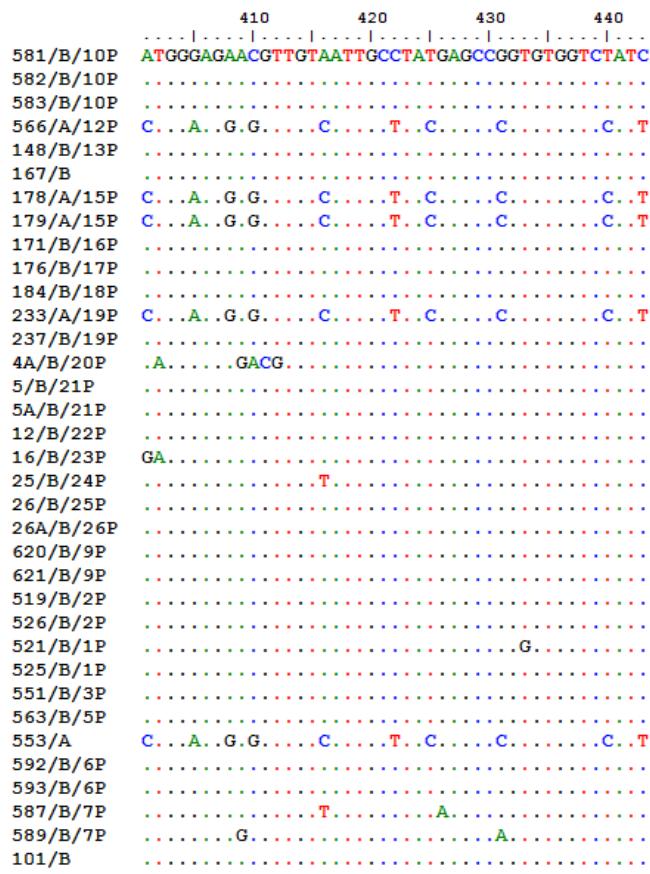


Figura 7: Distribución de las variaciones nucleotídicas en el locus de *tpi* en *Giardia duodenalis*

	10	20	30	40	50	60	70	80	90
521/B/1P	CGCGTCGACGACGACACCGCGTGTGAAGATGATCAAGGACGCCATCGCGACACCTTGACAGACTCATCCAGACAGAGTCGAGGAAGCGCCAGG								
551/B/3P					C				
563/A/5P			C		A				
565/B/5P									
620/B/9P					C			G	
621/B/9P					C			G	
581/B/10P					C				
582/B/10P					C				
583/B/10P					C				
167/B		A			C			G	
178/A/15P			C		A	C	G	G	
179/A/10P			C		A	C	G	G	
233/A/19P			C		A	C	G	G	
4A/B/20P									
5/B/21P									
5B/B/21P									
25/A/24P			C		A	C	G	G	
26A/A/25P			C		A	C	G	G	
5B/A			C		A	C	G	G	
27A/A			C		A	C	G	G	
	110	120	130	140	150	160	170	180	190
521/B/1P	AGGACATCCCGGAGGAAGTC	AAAGAAGTCTG	CGCGACAACATGTACCTGACGATCAAGGGAGATCGACACCATGGCGCAA	AACTTCCGCAA					
551/B/3P									
563/A/5P		G	C	A	A			T	
565/B/5P					A				
620/B/9P									
621/B/9P									
581/B/10P									
582/B/10P									
583/B/10P									
167/B									
178/A/15P		G	C	A				T	
179/A/10P		G	C	A				T	
233/A/19P		G	C	A				T	
4A/B/20P									
5/B/21P									
5B/B/21P									
25/A/24P		G	C	A				T	
26A/A/25P		G	C	A				T	
5B/A		G	C	A				T	
27A/A		G	C	A				T	
	210	220	230	240	250	260	270	280	290
521/B/1P	TGAGATGGGGACACGCTCAACAA	ACGTGAGACGAACCTCCAGAACCGATCGCCATCCACAA	CGACGCCATCGCAGCCCTCAGGAAGGAG						
551/B/3P									
563/A/5P	G	A	T	A	T			G	T
565/B/5P									
620/B/9P									
621/B/9P									
581/B/10P									
582/B/10P									
583/B/10P									
167/B									
178/A/15P	G	A	T	A	T			G	T
179/A/10P	G	A	T	A	T			G	T
233/A/19P	G	A	T	A	T			G	T
4A/B/20P									
5/B/21P									
5B/B/21P									
25/A/24P	G	A	T	A	T			G	T
26A/A/25P	G	A	T	A	T			G	T
5B/A	G	A	T	A	T			G	T
27A/A	G	A	T	A	T			G	T

	410	420
521/B/1P	TCTCCGCTGCCATCGAGAAGGAGACGATC	
551/B/3P	.....C.....	
563/A/5P	.....C..G.....	
565/B/5P	.....	T
620/B/9P	.....
621/B/9P	.....
581/B/10P	.....
582/B/10P	.....
583/B/10P	.....
167/B	.....C.....	
178/A/15P	.....C..G.....	
179/A/10P	.....C..G.....	
233/A/19P	.....C..G.....	
4A/B/20P	.....
5/B/21P	.....
5B/B/21P	.....
25/A/24P	.....C..G.....	
26A/A/25P	.....C..G.....	
5B/A	.....C..G.....	
27A/A	.....C..G.....	

Figura 8: Distribución de las variaciones nucleotídicas en el locus de β -giardina en *Giardia duodenalis*

	10	20	30	40	50	60	70	80	90
521-1	T	CAAGTGCAATGGATCGCTCGACTTCATTAAGAGCCACGTAGCGTCCATCGCCTCCATAAGATCCCCGAATCCGTGGACGTTGTTGCTCC							
521-4	..	A..					G..		
521-6	..	A..					G..		
521-9	..	A..					G..		
521-18	..	A..A					G..		
521-37	..	A..			T..		G..		
521-39	..	A..							
521-40	..								
521-44	..	A..			T..		G..		
521-46	..	A..					G..		
525-7	..	A..					G..		
525-9	..	A..A					G..		
525-11	..	A..A					G..		
525-13	..	A..					G..		
525-14	..	A..							
525-15	..								
525-18	..	A..					G..		
525-21	..	A..					G..		
525-22	..	A..					G..		
525-24	..	A..		G..			G..		
525-43	..	A..					G..		
	110	120	130	140	150	160	170	180	190
521-1	TGTACACCTTCTACAGCTATTGGCGAACACCTCGAAGTGTCTGAAAAATAGCACGACAGAACGTGTATCTGGAGGGGAAACGGTGCAATGGACCC								
521-4	..	G..		G..					
521-6	..	G..		G..					
521-9	..	G..		G..					
521-18	..	G..		G..G..					
521-37	..	G..	T..T..				A..		
521-39	..	G..							
521-40	..	G..					A..		
521-44	..	G..	G..T..T..						
521-46	..	G..		G..					
525-7	..	G..		G..					
525-9	..	G..		G..G..		G..		T..	C..
525-11	..	G..		G..G..					
525-13	..	G..		G..					
525-14	..	G..		G..					
525-15	..	G..							
525-18	..	G..		G..					
525-21	..	G..		G..					
525-22	..	G..		G..					
525-24	..	G..		G..					
525-43	..	G..		G..					
	210	220	230	240	250	260	270	280	290
521-1	ACAAAGCGTCGAGATGCTGGACATGGGCTGAGCCATGTAATAATAGGACACTCTGAAAGACGTAGAATCATGGCGAGACCAATGAGCAGA								
521-4	..								
521-6	..								
521-9	..								
521-18	..				G..				
521-37	..		A..						
521-39	..			C..		T..			
521-40	..			A..		C..			
521-44	..		T..						
521-46	..								
525-7	..					G..			
525-9	..					G..			
525-11	..					G..			
525-13	G..					G..			
525-14	..					G..			
525-15	..								
525-18	..					G..			
525-21	..					G..			
525-22	..					G..			
525-24	..				G..		G..		
525-43	..				G..				

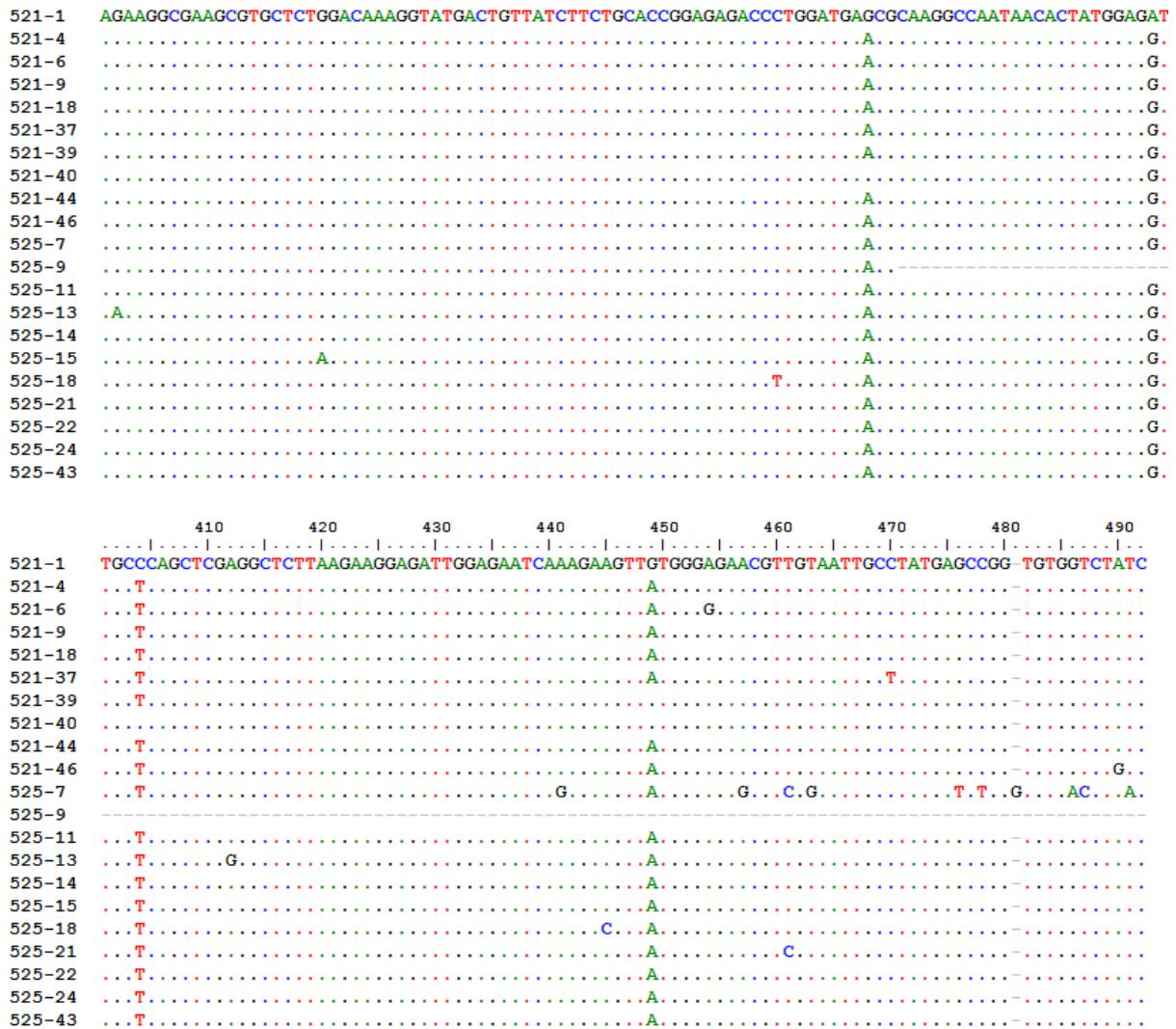


Figura 9: Distribución de las variaciones nucleotídicas de los clones de las muestras 521 y 525 del paciente 1 en el locus de *tpi* de *Giardia duodenalis*