

**Additional file 2.** Kimura-corrected average pairwise distances (intersection between line and column) between aligned sequence of *Rex3* partial reverse transcriptase sequences from Cichlids and Perciformes marine species. Above diagonal, average genetic distance within species.

	Cichid species							Perciformes marine species			
	Neotropical						African	<i>Gymnodraco</i> sp.	<i>Notothenia</i> sp.	<i>Siniperca</i> sp.	<i>Cissostichus</i> sp.
	<i>C. monoculus</i>	<i>A. ocellatus</i>	<i>G. proximus</i>	<i>P. scalare</i>	<i>S. discus</i>	<i>C. labridens</i>	<i>O. niloticus</i>				
	6.60%	6.80%	9.00%	13.00%	4.40%	4.80%	1.80%	0	0	0	0
<i>C. monoculus</i>											
<i>A. ocellatus</i>	9.11%										
<i>G. proximus</i>	11.31%	10.57%									
<i>P. scalare</i>	15.33%	13.39%	16.35%								
<i>S. discus</i>	11.56%	10.60%	12.58%	13.56%							
<i>C. labridens</i>	10.83%	10.02%	12.49%	13.37%	6.96%						
<i>O. niloticus</i>	13.13%	12.54%	13.94%	18.16%	13.57%	12.59%					
<i>Gymnodraco</i> sp.	31.25%	32.10%	31.60%	37.08%	31.86%	32.67%	29.39%				
<i>Notothenia</i> sp.	29.32%	29.76%	29.68%	34.75%	29.84%	30.61%	27.43%	2.63%			
<i>Siniperca</i> sp.	22.10%	23.29%	22.69%	27.66%	21.52%	22.32%	16.31%	29.56%	27.59%		
<i>Cissostichus</i> sp.	30.02%	30.74%	30.15%	35.64%	30.50%	31.32%	28.10%	2.19%	2.19%	28.26%	