

Fig. S1. Parsimonious evolutionary scenario leading to the extant gene orders in vertebrates by CREx analysis. Arrows show transcriptional orientation. tRNA-encoding genes are labeled with the one-letter code for the corresponding amino acid. (A) Actinopteri-Anguilliformes partial ancestral order, (B) Actinopteri-Pleuronectiformes ancestral order, (C) Amphibia-Anura partial ancestral, (D) Reptilia-Lacertilia-Chamaelonidae and Agamidae ancestor order, (E) Reptilia-Serpentes - Infraorder Alethinophidia ancestor, (F) Reptilia-Crocodylia ancestor order, (G) Aves ancestral order, (H) Mammalia-Marsupialia ancestor order. Each evolutionary event (reversal, transposition, and reversed translocations) is signaled to transform the ancestral genome into the derived mitochondrial genome. The superscript indicates the taxonomic orders that have partial ancestor (ancestor with reorganizations and with ancestral order)

