

Table S1: Best partitioning scheme and models for different datasets selected by PartitionFinder.

Data matrix	Subset Partitions		Model
AA-ML	P1	<i>ATP6, ATP8, COX2, COX3, CYTB, ND2, ND3, ND6</i>	MTART+I+G+F
	P2	<i>COXI</i>	MTART+I+G
	P3	<i>ND1, ND4, ND4L, ND5</i>	MTART+I+G+F
AA-BI	P1	<i>ATP6, ATP8, COX2, COX3, CYTB</i>	MTREV+I+G
	P2	<i>COXI</i>	MTREV+I+G
	P3	<i>ND1, ND3, ND4, ND5</i>	MTREV+I+G
	P4	<i>ND2</i>	MTREV+I+G
	P5	<i>ND4L, ND6</i>	MTREV+I+G
PCG12-ML	P1	<i>ATP6, ATP8, COXI, COX2, COX3, CYTB, ND1, ND2, ND3, ND4, ND4L, ND5, ND6</i>	GTR+I+G
PCG12-BI	P1	<i>ATP6, ATP8, COXI, COX2, COX3, CYTB, ND1, ND2, ND3, ND4, ND4L, ND5, ND6</i>	GTR+I+G
PCG12R-ML	P1	<i>ATP6, ATP8, COXI, COX2, COX3, CYTB, ND1, ND2, ND3, ND4, ND4L, ND5, ND6</i>	GTR+I+G
PCG12R-BI	P2	<i>rrnL, rrnS</i>	TVM+I+G
	P1	<i>ATP6, ATP8, COXI, COX2, COX3, CYTB, ND1, ND2, ND3, ND4, ND4L, ND5, ND6</i>	GTR+I+G
PCG-ML	P2	<i>rrnL, rrnS</i>	GTR+I+G
	P1	<i>ATP6_codon1</i>	GTR+I+G
	P2	<i>ND2_codon2, ATP8_codon2, ND6_codon2, ND3_codon2, ATP6_codon2</i>	TVM+I+G
	P3	<i>COX2_codon3, ATP6_codon3, COX3_codon3, ND3_codon3</i>	TIM+I+G
	P4	<i>ATP8_codon1, ND3_codon1, ND6_codon1, ND2_codon1</i>	GTR+I+G
	P5	<i>ATP8_codon3, CYTB_codon3, ND6_codon3</i>	GTR+G
	P6	<i>COX1_codon1</i>	GTR+I+G
	P7	<i>COX1_codon2, COX3_codon2, COX2_codon2, CYTB_codon2</i>	TVM+I+G
	P8	<i>COX1_codon3</i>	TRN+I+G
	P9	<i>CYTB_codon1, COX3_codon1, COX2_codon1</i>	GTR+I+G
	P10	<i>ND1_codon1, ND4_codon1, ND5_codon1, ND4L_codon1</i>	GTR+I+G
	P11	<i>ND1_codon2, ND5_codon2, ND4_codon2, ND4L_codon2</i>	GTR+I+G
	P12	<i>ND1_codon3</i>	K81UF+I
	P13	<i>ND2_codon3</i>	TRN+G
PCG-BI	P14	<i>ND4L_codon3, ND5_codon3, ND4_codon3</i>	TRN+I+G
	P1	<i>ATP6_codon1</i>	GTR+I+G
	P2	<i>ND3_codon2, ATP6_codon2, ATP8_codon2, ND6_codon2, ND2_codon2</i>	GTR+I+G
	P3	<i>COX2_codon3, ATP6_codon3, ND3_codon3, COX3_codon3</i>	GTR+I+G
	P4	<i>ATP8_codon1, ND6_codon1, ND2_codon1, ND3_codon1</i>	GTR+I+G
	P5	<i>ATP8_codon3, ND6_codon3, CYTB_codon3</i>	GTR+G
	P6	<i>COX1_codon1</i>	GTR+I+G
	P7	<i>COX1_codon2, COX3_codon2, COX2_codon2, CYTB_codon2</i>	GTR+I+G
	P8	<i>COX1_codon3</i>	HKY+I+G
	P9	<i>CYTB_codon1, COX3_codon1, COX2_codon1</i>	GTR+I+G
	P10	<i>ND1_codon1, ND4_codon1, ND4L_codon1, ND5_codon1</i>	GTR+I+G
	P11	<i>ND1_codon2, ND5_codon2, ND4_codon2, ND4L_codon2</i>	GTR+I+G
	P12	<i>ND1_codon3</i>	HKY+I+G
	P13	<i>ND2_codon3</i>	GTR+G
	P14	<i>ND4_codon3, ND4L_codon3, ND5_codon3</i>	HKY+I+G

PCGR-ML	P1	<i>ATP6_codon1</i>	GTR+I+G
	P2	<i>ND2_codon2, ATP8_codon2, ND6_codon2, ATP6_codon2, ND3_codon2</i>	TVM+I+G
	P3	<i>ATP6_codon3, COX3_codon3, ND3_codon3, COX1_codon3, COX2_codon3</i>	TIM+I+G
	P4	<i>ATP8_codon1, ND3_codon1, ND2_codon1, ND6_codon1</i>	GTR+I+G
	P5	<i>ATP8_codon3, CYTB_codon3, ND6_codon3</i>	GTR+G
	P6	<i>COX1_codon1</i>	GTR+I+G
	P7	<i>COX1_codon2, COX3_codon2, COX2_codon2, CYTB_codon2</i>	TVM+I+G
	P8	<i>CYTB_codon1, COX2_codon1, COX3_codon1</i>	GTR+I+G
	P9	<i>ND1_codon1, rrnS</i>	TVM+I+G
	P10	<i>ND1_codon2, ND4_codon2, ND4L_codon2, ND5_codon2</i>	GTR+I+G
	P11	<i>ND1_codon3</i>	K81UF+I
	P12	<i>ND2_codon3</i>	TRN+G
	P13	<i>ND4_codon1, ND5_codon1, ND4L_codon1</i>	GTR+I+G
	P14	<i>ND4L_codon3, ND4_codon3, ND5_codon3</i>	TRN+I+G
	P15	<i>rrnL</i>	GTR+I+G
PCGR-BI	P1	<i>ATP6_codon1</i>	GTR+I+G
	P2	<i>ND3_codon2, ATP6_codon2, ATP8_codon2, ND2_codon2, ND6_codon2</i>	GTR+I+G
	P3	<i>COX2_codon3, ATP6_codon3, ND3_codon3, COX3_codon3</i>	GTR+I+G
	P4	<i>ATP8_codon1, ND6_codon1, ND2_codon1, ND3_codon1</i>	GTR+I+G
	P5	<i>ATP8_codon3, ND6_codon3, CYTB_codon3</i>	GTR+G
	P6	<i>COX1_codon1</i>	GTR+I+G
	P7	<i>COX1_codon2, COX3_codon2, COX2_codon2, CYTB_codon2</i>	GTR+I+G
	P8	<i>COX1_codon3</i>	HKY+I+G
	P9	<i>CYTB_codon1, COX3_codon1, COX2_codon1</i>	GTR+I+G
	P10	<i>ND1_codon1, rrnS</i>	GTR+I+G
	P11	<i>ND1_codon2, ND4_codon2, ND4L_codon2, ND5_codon2</i>	GTR+I+G
	P12	<i>ND1_codon3</i>	HKY+I+G
	P13	<i>ND2_codon3</i>	GTR+G
	P14	<i>ND4_codon1, ND4L_codon1, ND5_codon1</i>	GTR+I+G
	P15	<i>ND4L_codon3, ND4_codon3, ND5_codon3</i>	HKY+I+G
	P16	<i>rrnL</i>	GTR+I+G
