

**Table S2.** No evidence for codon bias explaining the *KRTAP1* coding region pattern of concerted evolution

Human variant	Mouse variant	Human codon usage <sup>a</sup>		Mouse codon usage <sup>a</sup>		Support <sup>b</sup>
GGC	GGT	22.3	10.6	21.2	11.4	Dark Green
AGG	AGA	11.9	12	12.2	12.1	Light Pink
CCA	CCT	17.3	17.9	17.3	18.4	Dark Green
CGT	CGC	4.5	10.5	4.7	9.4	Red
GG(T/C) <sup>c</sup>	GGC	10.6	22.3	11.4	21.2	Red
TG(C/T) <sup>c</sup>	TGT	12.2	10.6	12.3	11.4	Light Green
CAC	CAT	15.2	11.1	15.3	10.6	Red
CGC	CGT	10.5	4.5	9.4	4.7	Dark Green
CC(G/A) <sup>c</sup>	CCA	7.3	17.3	6.2	17.3	Dark Green

a. Value on the left is the codon usage value for the human variant codon; that on the right for the mouse variant codon

b. Dark colors = both codons support/neutral for CAI explaining (green)/not explaining (red) concerted evolution pattern; light colors is where support is opposite for each codon with color representing the dominant effect (in terms of CAI magnitudes)

c. Difference is present in two of the four *KRTAP1* copies. Codon usage values on the left represent the human variant that differs from the mouse