

**Table S2 Amino acids and their synonymous codon usages**

<b>Amino Acid</b>	<b>aa usage</b>	<b>Synonymous codons</b>	<b>codon usage</b>
Ala	0.096	GCA	0.015
		GCC	0.037
		GCG	0.028
		GCT	0.016
Arg	0.063	CGA	<b>0.006</b>
		AGA	<b>0.009</b>
		AGG	<b>0.008</b>
		CGC	0.021
		CGG	0.013
		CGT	<b>0.007</b>
Asn	0.036	AAC	0.018
		AAT	0.018
Asp	0.053	GAC	0.028
		GAT	0.025
Cys	<b>0.015</b>	TGC	0.009
		TGT	<b>0.006</b>
Gln	0.039	CAA	0.014
		CAG	0.025
Glu	0.063	GAA	0.029
		GAG	0.034
Gly	0.074	GGA	0.015
		GGC	0.032
		GGG	0.014
		GGT	0.014
		CAC	0.013
His	0.023	CAT	0.010
		ATA	<b>0.008</b>
Ile	0.050	ATC	0.023
		ATT	0.018
		CTA	<b>0.006</b>
Leu	0.100	CTC	0.022
		CTG	0.035
		CTT	0.012
		TTA	0.011
		TTG	0.014
		AAA	0.022
Lys	0.047	AAG	0.025
Met	<b>0.019</b>	ATG	0.019
Phe	0.037	TTC	0.021

		TTT	0.016
Pro	0.056	CCA	0.012
		CCC	0.015
		CCG	0.018
		CCT	0.011
Ser	0.071	AGC	0.016
		AGT	0.009
		TCA	0.010
		TCC	0.013
		TCG	0.011
		TCT	0.011
Thr	0.053	ACA	0.011
		ACC	0.019
		ACG	0.012
		ACT	0.010
Trp	<b>0.013</b>	TGG	0.013
Tyr	0.027	TAC	0.014
		TAT	0.013
Val	0.067	GTA	<b><i>0.008</i></b>
		GTC	0.020
		GTG	0.026
		GTT	0.013

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Trp, Cys and Met are the three least used amino acids among all 20 (shown in bold). Of the 8 least used codons (bold and italic), 6 are codons of Arg, Ile and Leu. The other two encode Cys and Val.