

Table 3 The usage frequency of synonymous codons in high and low genome

Amino acid	Codon	High expressed (RSCU)	Weak expressed (RSCU)	Amino acid	Codon	High expressed (RSCU)	Weak expressed (RSCU)
Phe	TTT	1.05	1.04	Tyr	TAT	1.07	1
	TTC	0.95	0.96		TAC	0.93	1
Leu	TTA	0.69	0.65	TER	TAA	0.94	0.97
	TTG	1.37	1.44		TAG	0.69	0.78
	CTT	1.26	1.18		TGA	1.36	1.25
	CTC	1.1	1.46		His	CAT	1.12
	<u>CTA</u>	0.64	0.44	CAC		0.88	0.93
		<u>CTG</u>	0.93	0.84	Gln	CAA	1.09
Ile	ATT	1.25	1.26	CAG		0.91	0.91
	ATC	0.97	1.12	Asn	AAT	1.05	1.04
	<u>ATA</u>	0.79	0.61		AAC	0.95	0.96
Met	ATG	1	1	Lys	AAA	0.89	0.86
Val	GTT	1.28	1.32		AAG	1.11	1.14
	GTC	0.9	0.98	Asp	GAT	1.18	1.16
	<u>GTA</u>	0.63	0.43		GAC	0.82	0.84
	GTG	1.19	1.26	Glu*	<u>GAA</u>	1	0.9
Ser	TCT	1.27	1.47		GAG	1	1.1
	TCC	1.02	1.26	Cys	TGT	0.96	0.99
	<u>TCA*</u>	1.18	1.08		TGC	1.04	1.01
	<u>TCG</u>	0.67	0.55	Trp	TGG	1	1
Pro	CCT	1.26	1.19		Arg	<u>CGT</u>	0.85
	CCC	0.83	0.92	CGC		0.77	0.86
	CCA	1.29	1.33	<u>CGA</u>		0.84	0.52
	CCG	0.62	0.56	<u>CGG</u>		0.73	0.49
Thr	ACT	1.16	1.13	Ser	<u>AGT</u>	0.87	0.76
	ACC	1.05	1.33		<u>AGC</u>	0.99	0.88
	<u>ACA*</u>	1.15	1.06	Arg	AGA	1.47	1.82
	<u>ACG</u>	0.63	0.48		AGG	1.34	1.69
Ala	GCT	1.31	1.38	Gly	GGT	1.04	1.1
	GCC	1	1.23		GGC	0.97	1.04
	<u>GCA*</u>	1.18	0.94		GGA	1.11	1.06
	GCG	0.5	0.45		GGG	0.88	0.81

Note: *: Optimal codons; The underlined codons were high expression superior codons