

aa	codon	freq	rscu	aa	codon	freq	rscu	aa	codon	freq	rscu	aa	codon	freq	rscu
Phe	UUU	154	1.66	Ser	UCU	55	2.24	Tyr	UAU	51	1.44	Cys	UGU	7	1.08
	UUC	32	0.34		UCC	16	0.65		UAC	20	0.56		UGC	6	0.92
Leu	UUA	194	3.85		UCA	62	2.53	TER	UAA	0	0.00	Trp	UGA	70	1.97
	UUG	14	0.28		UCG	4	0.16		UAG	0	0.00		UGG	1	0.03
	CUU	28	0.56	Pro	CCU	33	1.52	His	CAU	35	1.27	Arg	CGU	10	1.21
	CUC	5	0.10		CCC	16	0.74		CAC	20	0.73		CGC	6	0.73
	CUA	56	1.11		CCA	33	1.52	Gln	CAA	45	1.88		CGA	16	1.94
	CUG	5	0.10		CCG	5	0.23		CAG	3	0.12		CGG	1	0.12
Ile	AUU	202	1.71	Thr	ACU	50	1.45	Asn	AAU	109	1.73	Ser	AGU	21	0.86
	AUC	34	0.29		ACC	24	0.70		AAC	17	0.27		AGC	1	0.04
Met	AUA	146	1.67		ACA	60	1.74	Lys	AAA	55	1.80		AGA	37	1.51
	AUG	29	0.33		ACG	4	0.12		AAG	6	0.20		AGG	0	0.00
Val	GUU	46	1.34	Ala	GCU	45	1.55	Asp	GAU	25	1.22	Gly	GGU	30	0.98
	GUC	6	0.18		GCC	29	1.00		GAC	16	0.78		GGC	6	0.20
	GUA	62	1.81		GCA	37	1.28	Glu	GAA	49	1.88		GGA	53	1.74
	GUG	23	0.67		GCG	5	0.17		GAG	3	0.12		GGG	33	1.08

Codon usage frequencies in the concatenated set of J-oriented PCGs (6,798 included nucleotide positions, with termination codons excluded) of the *F. octoculata* mitochondrial genome. RSCU=relative synonymous codon usage.

aa	codon	freq	rscu	aa	codon	freq	rscu	aa	codon	freq	rscu	aa	codon	freq	rscu
Phe	UUU	151	1.89	Ser	UCU	51	3.32	Tyr	UAU	71	1.71	Cys	UGU	18	1.80
	UUC	9	0.11		UCC	5	0.33		UAC	12	0.29		UGC	2	0.20
Leu	UUA	146	4.19		UCA	13	0.85	TER	UAA	0	0.00	Trp	UGA	16	1.52
	UUG	33	0.95		UCG	5	0.33		UAG	0	0.00		UGG	5	0.48
	CUU	15	0.43	Pro	CCU	14	1.65	His	CAU	14	1.75	Arg	CGU	13	2.36
	CUC	3	0.09		CCC	5	0.59		CAC	2	0.25		CGC	1	0.18
	CUA	12	0.34		CCA	12	1.41	Gln	CAA	14	1.75		CGA	4	0.73
	CUG	0	0.00		CCG	3	0.35		CAG	2	0.25		CGG	4	0.73
Ile	AUU	119	1.87	Thr	ACU	27	2.20	Asn	AAU	50	1.89	Ser	AGU	13	0.85
	AUC	8	0.13		ACC	5	0.41		AAC	3	0.11		AGC	4	0.26
Met	AUA	119	1.66		ACA	13	1.06	Lys	AAA	27	1.35		AGA	31	2.02
	AUG	24	0.34		ACG	4	0.33		AAG	13	0.65		AGG	1	0.07
Val	GUU	40	1.80	Ala	GCU	29	2.15	Asp	GAU	17	1.55	Gly	GGU	37	1.45
	GUC	5	0.22		GCC	9	0.67		GAC	5	0.45		GGC	6	0.24
	GUA	26	1.17		GCA	10	0.74	Glu	GAA	25	1.56		GGA	22	0.86
	GUG	18	0.81		GCG	6	0.44		GAG	7	0.44		GGG	37	1.45

Codon usage frequencies in the concatenated set of N-oriented PCGs (4,245 included nucleotide positions, with termination codons excluded) of the *F. octoculata* mitochondrial genome. RSCU=relative synonymous codon usage.