

Table S11 - Genetic code

generic tRNA	codon	Amino acid
ala1-tRNA	gct	ala-L
ala1-tRNA	gca	ala-L
ala1-tRNA	gcg	ala-L
ala2-tRNA	gcc	ala-L
arg1-tRNA	cgt	arg-L
arg1-tRNA	cgc	arg-L
arg1-tRNA	cga	arg-L
argU-tRNA	aga	arg-L
argW-tRNA	agg	arg-L
argX-tRNA	cgg	arg-L
asn1-tRNA	aac	asn-L
asn1-tRNA	aat	asn-L
asp1-tRNA	gac	asp-L
asp1-tRNA	gat	asp-L
cysT-tRNA	tgc	cys-L
cysT-tRNA	tgt	cys-L
gln1-tRNA	cag	gln-L
gln2-tRNA	caa	gln-L
glu1-tRNA	gaa	glu-L
glu1-tRNA	gag	glu-L
gly1-tRNA	ggc	gly
glyT-tRNA	ggt	gly
glyU-tRNA	gga	gly
glyU-tRNA	ggg	gly
hisR-tRNA	cac	his-L
hisR-tRNA	cat	his-L
ile1-tRNA	atc	ile-L
ile1-tRNA	att	ile-L
ile2-tRNA	ata	ile-L
leu1-tRNA	ctg	leu-L
leuU-tRNA	ctc	leu-L
leuU-tRNA	ctt	leu-L
leuW-tRNA	cta	leu-L
leu2-tRNA	ttg	leu-L
leuZ-tRNA	tta	leu-L
lys1-tRNA	aaa	lys-L
lys1-tRNA	aag	lys-L
met1-tRNA	atg	met-L
phe1-tRNA	ttc	phe-L
phe1-tRNA	ttt	phe-L
pro1-tRNA	ccg	pro-L
proL-tRNA	ccc	pro-L
pro2-tRNA	cct	pro-L
proM-tRNA	cca	pro-L
ser1-tRNA	tcc	ser-L
ser2-tRNA	tct	ser-L
serT-tRNA	tca	ser-L
ser3-tRNA	tcg	ser-L
serV-tRNA	agc	ser-L
serV-tRNA	agt	ser-L
thr1-tRNA	acc	thr-L
thr2-tRNA	act	thr-L
thrU-tRNA	aca	thr-L
thr3-tRNA	acg	thr-L
trpT-tRNA	tgg	trp-L
tyr1-tRNA	tac	tyr-L
tyr1-tRNA	tat	tyr-L
val1-tRNA	gta	val-L
val1-tRNA	gtg	val-L
val2-tRNA	gtc	val-L
val3-tRNA	gtt	val-L

tRNA sequences and modification were obtained from PMID: 15608164 - (Sprinzl and Vassilenko '05.D139-40)

Nucleotide Modification Abr.	Nucleotide Modification Name
ac4C	N4-acetylcytidine
acp3U	3-(3-amino-3-carboxypropyl)uridine
Cm	2'-O-methylcytidine
cmo5U	uridine-5-oxyacetic-acid
D	dihydrouridine
Gm	2'-O-methylguanosine
I	inosine
i6A	N6-isopentenyladenosine
k2C	lysidine
m1G	1-methylguanosine
m2A	2-methyladenosine
m5U	Ribosylthymine
m6A	N6-methyladenosine
m6mA	N6-methyl-N6-threonylcarbamoyladenine
m7G	7-methylguanosine
mnm5s2U	5-methylaminomethyl-2-thiouridine
mnm5se2U	5-methylaminomethyl-2-selenouridine
mnm5U	5-methylaminomethyluridine
ms216A	2-methylthio-N6-isopentenyladenosine
psi	pseudouridine
Q	Queuosine
s2C	2-thiocytidine
s4U	4-thiouridine
i6A	N6-threonylcarbamoyladenosine
Um	2'-O-methyluridine

Blattner Number	b3171	b2816	b2815	b2814	b1231	b1230	b3977	b3658
Gene Name	metY	metV	metW	metZ	tyrT	tyrV	tyrU	selC
generic tRNA in model					met1-tRNA	met1-tRNA	tyr1-tRNA	tyr1-tRNA
	met1-tRNA	met1-tRNA	met1-tRNA	met1-tRNA	tyr1-tRNA	tyr1-tRNA	tyr1-tRNA	selC-tRNA
tRNA DB ID	RX1660	RX1661	RX1661	RX1661	RY1660	RY1660	RY1661	RZ1665
Anticodon	CAU	CAU	CAU	CAU	QUA	QUA	QUA	UCA
6	C	C	C	G	G	G	G	G
7 G	G	G	G	G	G	G	G	A
8 C	C	C	C	U	U	U	U	A
9 G	G	G	G	G	G	G	G	G
10 G	G	G	C	C	C	C	C	C
11 A	A	A	A	C	C	C	C	G
12 G	G	G	C	C	C	C	C	U
13 C	C	C	C	G	G	G	G	C
14 A	A	A	A	A	A	A	A	U
15 G	G	G	G	G	G	G	G	C
16 C	C	C	C	C	C	C	C	C
17 C	C	C	C	C	C	C	C	-
17A	U	U	U	U	-	-	-	-
18 G	G	G	G	Gm	Gm	Gm	Gm	G
19 G	G	G	G	G	G	G	G	G
20 D	D	D	D	C	C	C	C	D
20A	-	-	-	-	C	C	C	G
20B	-	-	-	-	A	A	A	-
21 A	A	A	A	A	A	A	A	A
22 G	G	G	G	A	A	A	G	-
23 C	C	C	G	G	G	G	G	-
24 U	U	U	U	G	G	G	G	C
25 C	C	C	C	G	G	G	G	G
26 G	G	G	A	A	A	A	G	-
27 U	U	U	U	G	G	G	G	C
28 C	C	C	C	C	C	C	C	U
29 G	G	G	G	A	A	A	G	-
30 G	G	G	G	G	G	G	G	-
31 G	G	G	G	A	A	A	A	A
32 Cm	Cm	Cm	Cm	C	C	C	C	C
33 U	U	U	U	U	U	U	U	U
34 C	C	C	Q	Q	Q	Q	U	U
35 A	A	A	U	U	U	U	I	C
36 U	U	U	U	A	A	A	A	A
37 A	A	A	A	ms2id6	ms2id6A	ms2id6A	ms2id6A	ms2id6A
38 A	A	A	A	A	A	A	A	A
39 C	C	C	C	psl	psl	psl	psl	U
40 C	C	C	C	C	C	C	C	C
41 C	C	C	D	U	U	U	U	C
42 G	G	G	G	G	G	G	G	A
43 A	A	A	A	C	C	C	G	-
44 A	A	A	A	C	C	C	C	U
45 G	G	G	G	-	-	-	-	-
e11	-	-	-	-	G	G	G	U
e12	-	-	-	-	U	U	U	G
e13	-	-	-	-	C	C	C	G
e14	-	-	-	-	-	I	I	G
e15	-	-	-	-	-	I	I	G
e16	-	-	-	-	-	I	I	C
e17	-	-	-	-	-	I	I	C
e1	-	-	-	-	A	A	A	G
e2	-	-	-	-	U	U	C	C
e3	-	-	-	-	C	C	A	C
e4	-	-	-	-	-	I	I	G
e5	-	-	-	-	-	I	I	C
e6	-	-	-	-	-	I	I	G
e36	-	-	-	-	-	I	I	G
e25	-	-	-	-	-	I	I	U
e24	-	-	-	-	-	I	I	C
e23	-	-	-	-	G	G	G	C
e22	-	-	-	-	A	A	A	C
e21	-	-	-	-	C	C	C	G
46 A	m7G	m7G	m7G	U	U	U	I	-
47 U	U	U	U	U	U	U	U	I
48 C	C	C	C	C	C	C	G	-
49 G	G	G	G	G	G	G	G	-
50 U	U	U	U	A	A	A	C	-
51 C	C	C	C	A	A	A	A	A
52 G	G	G	G	B	B	B	G	-
53 G	G	G	G	G	G	G	G	-
54 m8U	m8U	m8U	m8U	m8U	m8U	m8U	m8U	m8U
55 psl	psl	psl	psl	psl	psl	psl	psl	psl
56 C	C	C	C	C	C	C	C	C
57 A	A	A	A	G	G	G	G	G
58 A	A	A	A	A	A	A	A	A
59 A	A	A	A	A	A	A	A	C
60 U	U	U	U	U	U	U	U	U
61 C	C	C	C	C	C	C	C	C
62 C	C	C	C	C	C	C	C	C
63 G	G	G	G	U	U	U	U	U
64 G	G	G	G	U	U	U	G	-
65 C	C	C	C	C	C	C	C	U
66 C	C	C	C	C	C	C	C	G
67 C	C	C	C	C	C	C	C	A
68 C	C	C	C	C	C	C	C	U
69 C	C	C	C	C	C	C	C	I
70 C	C	C	C	C	C	C	C	C
71 G	G	G	G	A	A	A	I	U
72 C	C	C	C	C	C	C	C	U
73 A	A	A	A	A	A	A	A	G
74 C	C	C	C	C	C	C	C	C
75 C	C	C	C	C	C	C	C	C
76 A	A	A	A	A	A	A	A	A
							C	
							A	

Nucleotide position