Table S6. Ribosome binding sites (RBS) in the 5′-untranslated regions (5′-UTR)

Transcript	RBS in 5′-UTR[a]	Coordinates[b]	Dir[c]
16S rRNA 3′ complement	**GGAGGUGA**	157985–157992	+
MJ0007	AUAUUAAA 62 nt- UUU**GGUGA**UAUG**AUG**	8875–8882	+
MJ0035	UAUAAUUUUU 32 nt- **GGUGA**GUAUC**AUG**	37282–37275	–
MJ0068	UUGGUA**G**UU 34 nt- **GGUGA**GAUAAG**AUG**	65875–65868	–
MJ0094	AAUAAACUUU 4 nt- **GGUGA**UUCUAA**UG**	89494–89487	–
MJ0113	AUGACAGAUUG 18 nt- **GGUGA**GGUU**AUG**	111527–111520	–
MJ0136A	ACUAUAAUU 115 nt- **AGGUGA**AAUAA**AUG**	131454–131461	+
MJ0136B	ACUAUAAUU 92 nt- **AGGUGA**AAUAA**AUG**	131454–131461	+
MJ0161A	AAAAAGGAUU 306 nt- **GGUGA**AUAUA**AUG**	165172–165165	–
MJ0161B	AAAAAGGAUU 21 nt- **GGUGA**AUAUA**AUG**	165172–165165	–
MJ0168	AUCUAUUGU 4 nt- **GAGGUG**GUAUU**AUG**	171022–171015	–
MJ0176	AAUAUGCU 266 nt- **GGAGGU**U**A**GAUU**AUG**	178408–178415	+
MJ0199	ACAUUUUA 16 nt- **GAGGUG**GUAAUA**AUG**	192369–192376	+
MJ0202	UUAAAUUUCAU 68 nt- **GGUGA**GAGU**GUG**	193564–193571	+
MJ0205	AAUUGUCUAA 25 nt- **AGGUGA**AAAG**AUG**	198462–198455	–
MJ0217	UGAAAAGA 139 nt- **GAGGU**UGAGAAU**AUG**	208960–208953	–
MJ0223	AAUAACU**G**C 214483– **AGGUG**GAAGU**AUG**	214476	–
MJ0224A	AUUUCCUCCU 27 nt- **GAGGU**A**A**AGU**AUG**	215080–215073	–
MJ0224B	AUUUCCUCCU 21 nt- **GAGGU**A**A**AGU**AUG**	215080–215073	–
MJ0269	UGACAGUUUA 8 nt- **AGGUGA**GUGU**AUG**	255910–255903	–
MJ0299	CAAAAAACAG 21 nt- **GGUGA**GCAGA**AUG**	282928–282921	–
MJ0307	GAGGUUUUUA 10 nt- **AGGUG**UUAGU**AUG**	288292–288285	–

	35 nt-	293449–	
MJ0313	AAUAAAUA**AGGUGA**UGUAGA**GUG**	293442	–
	5 nt-	297448–	
MJ0318	AAUCUUAAU**GGAGG**GA**A**ACU**AUG**	297441	–
	138 nt-	336051–	
MJ0369	AAAUUACUU**GGUGA**GGGUGA**AUG**	336044	–
	134 nt-	336299–	
MJ0370A	AAUAAUAC**GGAGGU**C**A**UAAC**GUG**	336306	+
	53 nt-	336299–	
MJ0370B	AAUAAUAC**GGAGGU**C**A**UAAC**GUG**	336306	+
	41 nt-	365395–	
MJ0405A	AAGAUUUUU**AGGUGA**AAAUU**AUG**	365388	–
	16 nt-	365395–	
MJ0405B	AAGAUUUUU**AGGUGA**AAAUU**AUG**	365388	–
	206 nt-	399192–	
MJ0445A	AAUAAAAAAA**AGGUGA**UAAA**AUG**	399185	–
	147 nt-	399192–	
MJ0445B	AAUAAAAAAA**AGGUGA**UAAA**AUG**	399185	–
	18 nt-	448281–	
MJ0507A	UUGUUAAAU**AGGUGA**AAAUC**AUG**	448274	–
	7 nt-	448281–	
MJ0507B	UUGUUAAAU**AGGUGA**AAAUC**AUG**	448274	–
	120 nt-	450567–	
MJ0510A	AAAAAGAAA**GGAGG**AUGACU**AUG**	450560	–
	17 nt-	450567–	
MJ0510B	AAAAAGAAA**GGAGG**AUGACU**AUG**	450560	–
	19 nt-	484420–	
MJ0547	AUUUUAGAAU**GGUGA**CAUUA**AUG**	484413	–
	4 nt-	490768–	
MJ0555	UUUAAAAA**AGGUGA**GAGAUU**AUG**	490775	+
	10 nt-	495590–	
MJ0561	CAGUGAAAA**AGGUG**GUUUUA**UUG**	495597	+
	22 nt-	586378–	
MJ0660	AAAUAAAUUU**GGUGA**AUUGA**AUG**	586371	–
	25 nt-	592622–	
MJ0666A	UACUUCUCAUU**GGUGA**AAAC**AUG**	592615	–
	5 nt-	592622–	
MJ0666B	UACUUCUCAUU**GGUGA**AAAC**AUG**	592615	–
		592619–	
MJ0666C	**GGUGA**AAAC**AUG**	592615	–
	21 nt-	592689–	
MJ0667A	AGAAAUUA**G**U**GGUGA**UUUAA**AUG**	592696	+
	6 nt-	592689–	
MJ0667B	AGAAAUUA**G**U**GGUGA**UUUAA**AUG**	592696	+
	151 nt-	599242–	
MJ0673	CAAUUAUUAC**AGGUG**UUAAU**AUG**	599249	+

	5 nt-	622534–	
MJ0697A	UAUUAUUUUUU**GGUGA**UAAAA**AUG**	622541	+
		622537–	
MJ0697B	**GGUGA**UAAAA**AUG**	622541	+
	8 nt-	654940–	
MJ0720	UAAUCUUUUU**GGUGA**UAAGU**AUG**	654933	–
	118 nt-	656563–	
MJ0722	AAAAAUUUU**GGAGG**AAGAAA**AUG**	656556	–
	127 nt-	656739–	
MJ0723	AUCCGAAAUUC**GGUGA**UAUU**AUG**	656746	+
	7 nt-	668869–	
MJ0740	AUAGCACAA**AGGUGA**UAGAA**AUG**	668862	–
	11 nt-	672859–	
MJ0746	AAAGUUAAAA**AGGUGA**AAGC**AUG**	672852	–
	42 nt-	688466–	
MJ0765	AAAAGUCUUAG**GGUGA**AAUA**AUG**	688459	–
	18 nt-	707003–	
MJ0784	AUUAACAAAA**AGGUGA**GAGG**AUG**	707010	+
	111 nt-	723760–	
MJ0800	UAUUAAAUUG**GGUGA**AGUUA**AUG**	723767	+
	19 nt-	744525–	
MJ0822	AAAAACUU**AGGUGA**UAAAGU**AUG**	744518	–
	36 nt-	747300–	
MJ0825	AAUUAAUA**GAGGUG**GAAGAU**AUG**	747293	–
		773691–	
MJ0847	AUGUAAAAU**GAGGUGA**UAGG**AUG**	773698	+
		788088–	
MJ0864	**GAGGUGA**UACU**AUG**	788082	–
	41 nt-	807766–	
MJ0882A	AAUAAGAGCAC**GGUGA**UAGA**AUG**	807773	+
	22 nt-	807766–	
MJ0882B	AAUAAGAGCAC**GGUGA**UAGA**AUG**	807773	+
	69 nt-	821691–	
MJ0891	AUAUACUC**AGGUGA**UAUGAG**AUG**	821698	+
	162 nt-	917581–	
MJ0986	GUGUUUU**AGGUGA**GUACAUU**AUG**	917574	–
	121 nt-	917895–	
MJ0987	CUUAACUU**GAGGUGA**CUGUU**AUG**	917902	+
	3 nt-	919927–	
MJ0990	AAAAUCUCAU**GGUGA**UAGCU**AUG**	919920	–
	11 nt-	928526–	
MJ0999	UAACAAUCU**GAGGUGA**GAAG**AUG**	928519	–
	50 nt-	949139–	
MJ1018	UGAUGAAAU**GGUGA**AUAGAC**AUG**	949132	–
	42 nt-	949245–	
MJ1019A	UAGGUAUUUU**GGUGA**AAUAU**AUG**	949252	+

	96 nt-	967180–	
MJ1035A	GUAAUAAAAA**AGGUGA**UAAC**UUG**	967173	–
	11 nt-	967180–	
MJ1035B	GUAAUAAAAA**AGGUGA**UAAC**UUG**	967173	–
	13 nt-	1086343–	
MJ1146A	AAAUUUCAAAU**GGUGA**AUCU**AUG**	1086336	–
	6 nt-	1086343–	
MJ1146B	AAAUUUCAAAU**GGUGA**AUCU**AUG**	1086336	–
	21 nt-	1097610–	
MJ1158	UCCAACAUUUU**GGUGA**UUUU**AUG**	1097603	–
	8 nt-	1125177–	
MJ1186	AUUAAAAAA**AGGUGA**AUAUAG**AUG**	1125184	+
	13 nt-	1171530–	
MJ1228	GAAAAUAAA**AGGUGA**UAAUA**AUG**	1171523	–
		1191352–	
MJ1249	AAUAACUUAG**GGUGA**AACU**AUG**	1191359	+
	11 nt-	1201126–	
MJ1259	AGGAUGGG**G**U**U**G**GUGA**GAAG**AUG**	1201133	+
	207 nt-	1202271–	
MJ1260	UAAAAAUA**GGAGG**GA**A**UACU**AUG**	1202278	+
	4 nt-	1282497–	
MJ1333	UUACACAAU**AGGUGA**AAUGA**AUG**	1282504	+
	96 nt-	1365750–	
MJ1403	GAAGUAGUA**GAGGUG**GGAAG**AUG**	1365743	–
	9 nt-	1366093–	
MJ1404	UCUGUUAAA**AGGUGA**GAUUA**AUG**	1366100	+
	22 nt-	1458902–	
MJ1486	AAAAUUUUUU**GGUGA**AAUUU**AUG**	1458895	–
	11 nt-	1511794–	
MJ1534	ACAAAAUU**G**AG**GGUGA**GAUU**GUG**	1511801	+
	19 nt-	1521399–	
MJ1543	GAGUCUUUAU**GGUGA**UAGAA**AUG**	1521406	+
	19 nt-	1559241–	
MJ1586	AUUUCCUAUUU**GGUGA**GAGA**AUG**	1559248	+
	37 nt-	1564585–	
MJ1592	GUUAUAGCUA**AGGUGA**AAGU**AUG**	1564592	+
	34 nt-	1617223–	
MJ1636	CAUGUUCCAUU**GGUGA**UAAG**AUG**	1617230	+

[a]The first data row shows the sequence (5′→3′) of eight nucleotides complementary to the 3′ end of the 16S rRNA. The following rows show the sequences (5′→3′) of the 5′-UTRs including the translation start codons (bold). The RBSs are shaded, and the nucleotides that match the 16S rRNA 3′ end complement are shown in bold and are underlined. In this study, an RBS is defined as a sequence that has at least 5 consecutive matches to the 16S rRNA 3′ end complement, and has a spacing of 3 to 7 nucleotides between the 3′ edge of the sequence and the 5′ edge of the translation start codon.

[b]Coordinates of RBSs (shaded) in the chromosome of *M. jannaschii* (NCBI accession no. NC_000909.1).

[c]Direction of RBS. +, from a smaller genomic coordinate to a larger genomic coordinate; –, from a larger genomic coordinate to a smaller genomic coordinate.