Table S1. Oligonucleotides and primers used in this study.

Target (construct, gene, or mutation)	Process	Oligonucleotide Sequence 5' to 3'
His-RlmN	Cloning in pET15b	GATA**CCATGG**GTCATCATCACCATCACCATTCTGAACAATTAGTCACACCTGAA
		GATA**GGATCC**TTATCAGACCGCTTTAATGTCGATG
$tRNA^{Gln}_{UUG}$	Cloning in pUC19	GATA**GAATTC**aattaatacgactcactatagGGGGGTATCGCCAAGCGGTA
		GATA**GGATCC**TGGCTGGGGTACCTGGATTC
$tRNA^{Arg}_{ACG}$	Cloning in pUC19	GATA**GAATTC**aattaatacgactcactatagGGCATCCGTAGCTCAGCTGGATAG
		GATA**GGATCC**TGGTGCATCCGGGAGGATTC
$tRNA^{Chimera}_{UUG}$	Cloning in pBSKrna	GCCCGGATAGCTCAGTCGGTAGAGCA**CCGGTTTTTGATACCGG**GGGTCCAGGGTTCAAGTCCCTGTTCGGGCGCCA
		GATA**GAATTC**GCCCGGATAGCTCAGTCGGTAG*
		GATA**CTGCAG**TGGCGCCCGAACAGGGACT*
A37C	Cloning in pBSKrna	GCCCGGATAGCTCAGTCGGTAGAGCA**CCGGTTTTTGCTACCGG**GGGTCCAGGGTTCAAGTCCCTGTTCGGGCGCCA
U35A and U35G	Cloning in pBSKrna	GCCCGGATAGCTCAGTCGGTAGAGCA**CCGGTTTTRGATACCGG**GGGTCCAGGGTTCAAGTCCCTGTTCGGGCGCCA
G36U and G36A	Cloning in pBSKrna	GCCCGGATAGCTCAGTCGGTAGAGCA**CCGGTTTTTWATACCGG**GGGTCCAGGGTTCAAGTCCCTGTTCGGGCGCCA
Δ*rlmN*	Mutation checking, PCR	TCTTTGGCGAAGGCGAAGTGTG + *kan* primer (Datsenko & Wanner, 2000)
Δ*miaA*	Mutation checking, PCR	GAAGCAGTCCGTATTCGAACCTG + *kan* primer (Datsenko & Wanner, 2000)
Δ*mnmE*	Mutation checking, PCR	TCGTCAGCAACCTGGTAACCA + *kan* primer (Datsenko & Wanner, 2000)
Δ*mnmA*	Mutation checking, PCR	GGGTCAGCGCCGAAGAA + *kan* primer (Datsenko & Wanner, 2000)
rpsL222	Mutation checking, PCR & Sequencing	CTTGACACCTTTTCGGCATCGCC**
		CGTTTGGCCTTACTTAACGGAGAACC
rpsD12	Mutation checking, PCR & Sequencing	GATGTGACTCGATCCCTCATAACG**
		CTCTGTCACAGAACCCTGCATTGTG
$tRNA^{Chimera}_{UUG}$	Quantitative PCR	GCCCGGATAGCTCAGTCGGTAG
		TGGCGCCCGAACAGGGACT
$tRNA^{Lys}_{UUU}$	Quantitative PCR	GGGTCGTTAGCTCAGTTGGTAG
		TGGTGGGTCGTGCAGGATTCG

Bold sequences represent restriction targets for cloning in the corresponding plasmids; underlined sequences define the His-tag carried by recombinant RlmN; lowercase sequences define consensus T7 promoter; bold and underlined sequences define the Anticodon Stem Loop of $tRNA^{Gln}_{UUG}$ fused to D, T and acceptor arms of the tRNA scaffold encoded in pBSKrna plasmid. Nucleotide variants are presented according to IUPAC nomenclature. Primers labeled with an asterisk were used for amplification of the larger oligonucleotide containing the $tRNA^{Chimera}_{UUG}$ sequence and its variants carrying mutations in U35, G36, and A37. Primers labeled with a double asterisk were used for DNA sequencing.