

Table S3. Oligonucleotide sequences of primers and probes

Name	Sequence	Use
tRNA ^{Und} 36-15 3' biot	GTCTTCCGGGTTCCTACTAGCC	Isolation of tRNA ^{Und}
tRNA ^{Val} 33-12 3'biot	AGGCAGACGCTCTCCCAACTG	Isolation of tRNA ^{Val}
Lc tRNA ^{Und} F	GGGGCTGCAGTAATACGACTCACTATAGCAACT GAAGCTCCGGCTAGTGGGAACCCGGAAGAC	Template for tRNA transcription
Lc tRNA ^{Und} R	TGGTGGGCCTAAATGGACTTGAACCATCGACCT CACGCTTATCAGGCGTGCGCTCTAAAC	Template for tRNA transcription
Lc tRNA ^{Val} F	GGGGCTGCAGTAATACGACTCACTATAGGAGGA TTAGCTCAGTTGGGAGAGCGTCTGCCTTAC	Template for tRNA transcription
Lc tRNA ^{Val} R	TGGTGGAGGATACAGGGCTCGAACCTGTGaCCC TCTGCTTGTAAGGCAGACGCTCTCCCAA	Template for tRNA transcription
Lp tRNA ^{Asp} (GUC) F	GGGGCTGCAGTAATACGACTCACTATAGGTCCG TTGGTCTAGTTGGTTTAGGACGCCTGCCTGTC	Template for tRNA transcription
Lp tRNA ^{Asp} (GUC) R	TGGCGGTCCGTACGAGACTCGAACTCGTGATCT CCTGCGTGACAGGCAGGCGTCCTAAA	Template for tRNA transcription
Lc tRNA ^{Und} U29-A41 F	GGGGCTGCAGTAATACGACTCACTATAGCAACT GAAGCTCCGGCTAGTGGGAACCTGGAAGAC	Template for tRNA transcription
Lc tRNA ^{Und} U29-A41 R	TGGTGCAACTGGCAGGAGTCGAACCTACCCGCC TGAACGTCTTCCAGGTTCCCACTAG	Template for tRNA transcription
Lc tRNA ^{Und} U4-A69 F	GGGGCTGCAGTAATACGACTCACTATAGCATCT GAAGCTCCGGCTAGTGGGAACCCGGAAGAC	Template for tRNA transcription
Lc tRNA ^{Und} U4-A69 R	TGGTGCATCTGGCAGGAGTCGAACCTACCCGCC GGAACGTCTTCCGGGTTCCTACTAG	Template for tRNA transcription
Lc pET-HRV ValRS F	GTC CTC TTC CAG GGT CCT ATGAAAGAGC AAGCATTAGC AC	Recombinant of <i>Lc</i> ValRS
Lc ValRS-pET R	TGTTAGCAGCCGGATCTCATTAAGCCTGCTGC AACTGTG	Recombinant of <i>Lc</i> ValRS
pET22b after His6 F	TGAGATCCGGCTGCTAACAAA	Recombinant of <i>Lc</i> ValRS
pET22b Nter-His HRV R	AGG ACC CTG GAA GAG GAC TTC TAG GTG GTG GTG GTG GTG	Recombinant of <i>Lc</i> ValRS
mRNA T7 SD 5'	GCTAATACGACTCACTATAGGGTTAACTTAAG AAAGGAGGTTATACT	Template for mRNA transcription
mRNA AspValGUA3'	TTTTTCTGCAGTTATACGTCAGTATAACCTCCT TT CTTAAGTT	Template for mRNA transcription

mRNA AspValGUG3'	TTTTTCTGCAGTTACACGTCAGTATAACCTCCT TT CTTAAGTT	Template for mRNA transcription
mRNA AspValGUU3'	TTTTTCTGCAGTTAAACGTCAGTATAACCTCCT TT CTTAAGTT	Template for mRNA transcription
mRNA AspValGUC3'	TTTTTCTGCAGTTAGACGTCAGTATAACCTCCT TT CTTAAGTT	Template for mRNA transcription
mRNA AspProCCA3'	TTTTTCTGCAGTTATGGGTCAGTATAACCTCCT TT CTTAAGTT	Template for mRNA transcription