

Supplementary Table 2 Primers Used

Name	Sequence (5' – 3')	Purpose
528/36N5f wd	GGAAAGGTCTCAGCAGCCGCNNNNNCGGAGGGT GCAAGCGTTAATCGGAATTAC	528/36N5 library construction
528/36N6f wd	GGAAAGGTCTCAGCAGCCGCNNNNNCGGAGGG TGCAAGCGTTAATCGGAATTAC	528/36N6 library construction
528/36N7f wd	GGAAAGGTCTCAGCAGCCGCNNNNNCGGAGG GTGCAAGCGTTAATCGGAATTAC	528/36N7 library construction
528/36N8f wd	GGAAAGGTCTCAGCAGCCGCNNNNNCGGAG GGTGCAAGCGTTAATCGGAATTAC	528/36N8 library construction
528/36N9f wd	GGAAAGGTCTCAGCAGCCGCNNNNNCGGA GGGTGCAAGCGTTAATCGGAATTAC	528/36N9 library construction
528/36revL	GAGTAGGTCTCACTGCTGGCACGGAGTTAGCCGG TGCTTCTTCTG	528/36N5,6,7,8,9 libraries construction
1fSer2Fla	CACAAGTATACGCCGCTTCTTTGAGCGAACGATC AAAAATAAGTGGCGCCCATCAAAAAAATATTCT CAACATAAAAACTTTGTGTAATACTTG	Ser ² tRNA with mutated ASL, primer assembly
2fSer2Fla	CTCAACATAAAAACTTTGTGTAATACTTGTAACG CTGAATTCACGTGGCCGGCCATATGGGAGAGATG CCGGAGCGGCTGAACGGAC	Ser ² tRNA with mutated ASL, primer assembly
3rSer2Fla	GTGGCGGAGAGAGGGGGATTTGAACCCCGGTAG AGTTGCCCTACTCCGGTGTTAGAATACCGGTCCG TTCAGCCGCTCCGGCATCTCTC	Ser ² tRNA with mutated ASL, primer assembly
4rSer2Fla	CACAAGTATACTTAAAAAAAATCCTTAGCTTTCGC TAAGGATCTGCAGCCCGGGCGCGCCTAGGTGGCG GAGAGAGGGGGATTTGAAC	Ser ² tRNA with mutated ASL, primer assembly
CATS103T AGAfw	CAGACTGAAACGTTTTAGATCGCTCTGGAGTGAA TACCACGACGATTTC	TAGA mutation at Ser 103
CATS103T AGArv	TTCACTCCAGAGCGATCTAAAACGTTTCAGTCTGC TCATGGAAAACGGTG	TAGA mutation at Ser 103
CATS146T AGAfw	AATATGTTTTTCGTCTAGAGCCAATCCCTGGGTGA GTTTCACCAGTTTTG	TAGA mutation at Ser 146
CATS146T	CACCCAGGGATTGGCTCTAGACGAAAAACATATT	TAGA mutation at

AGArv	CTCAATAAACCCTTTAG	Ser 146
CATS103T AGfw	CAGACTGAAACGTTTTAGTCGCTCTGGAGTGAAT ACCACGACGATTTCC	TAG mutation at Ser 103
CATS103T AGrv	TTCACTCCAGAGCGACTAAAACGTTTCAGTCTGCT CATGGAAAACGGTG	TAG mutation at Ser 103
CATS146T AGfw	AATATGTTTTTCGTCTAGGCCAATCCCTGGGTGAG TTTCACCAGTTTTG	TAG mutation at Ser 146
CATS146T AGrv	CACCCAGGGATTGGCCTAGACGAAAAACATATTC TCAATAAACCCTTTAG	TAG mutation at Ser 146
TRNAtagf w	CTACTCCGGTGTTAGTATAACCGGTCCGTTCAGCCG CTCCGGCATCTCTCC	anti-UAGA Ser ² tRNA with mutated ASL
TRNAtagtr v	TGAACGGACCGGTATACTAACACCGGAGTAGGGG CAACTCTACCGGGGGT	anti-UAGA Ser ² tRNA with mutated ASL
