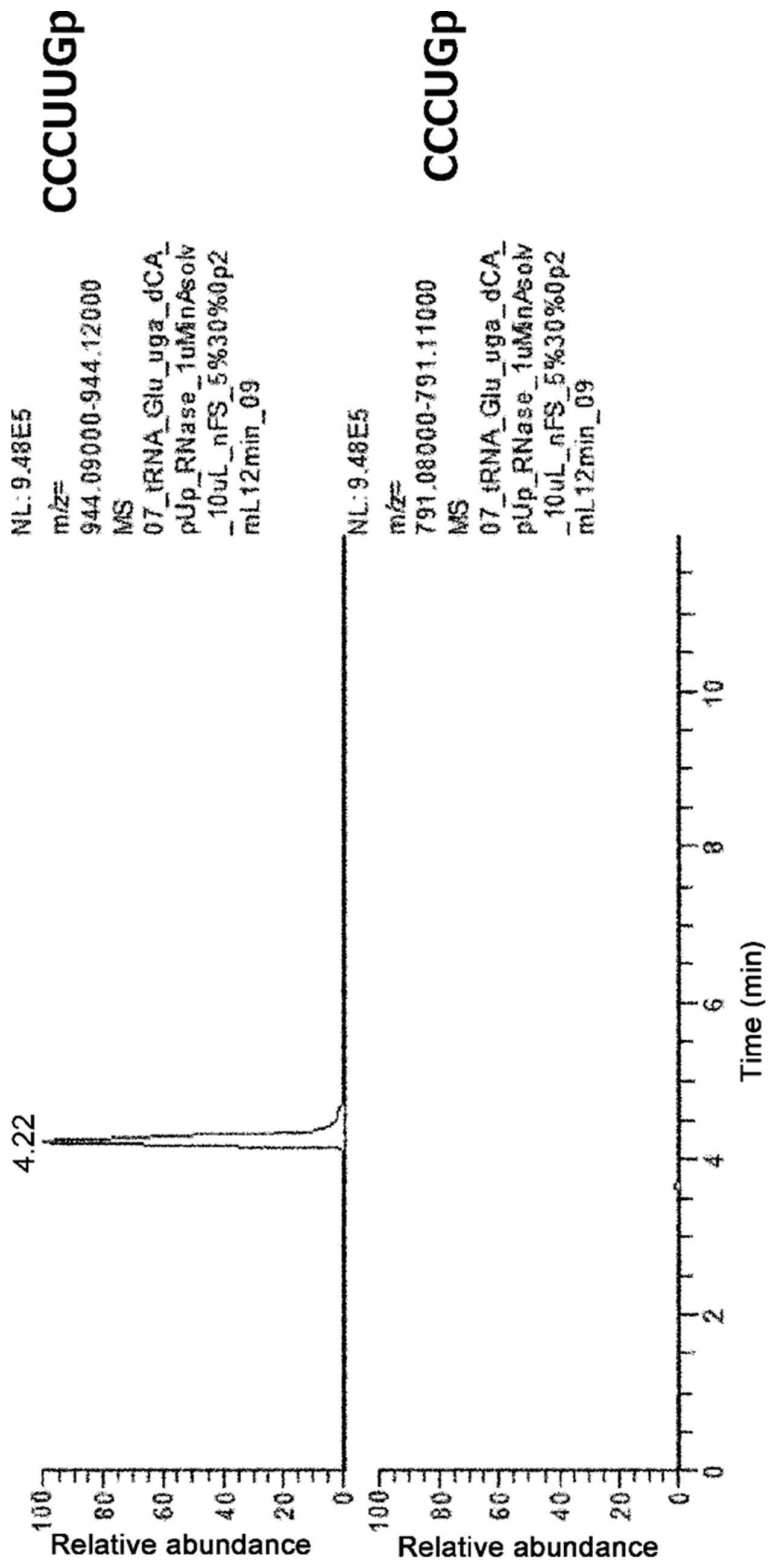

CCCUUGp
NL: 9.48E5
m/z=
944.09000-944.12000
MS
07_tRNA_Glu_uga_dCA_
pUp_RNase_1uMinAsolv
_10uL_nFS_5%30%0p2
mL12min_09
4.22
Relative abundance
CCCUGp
NL: 9.48E5
m/z=
791.08000-791.11000
MS
07_tRNA_Glu_uga_dCA_
pUp_RNase_1uMinAsolv
_10uL_nFS_5%30%0p2
mL12min_09
Relative abundance
Time (min)

FIG. 1

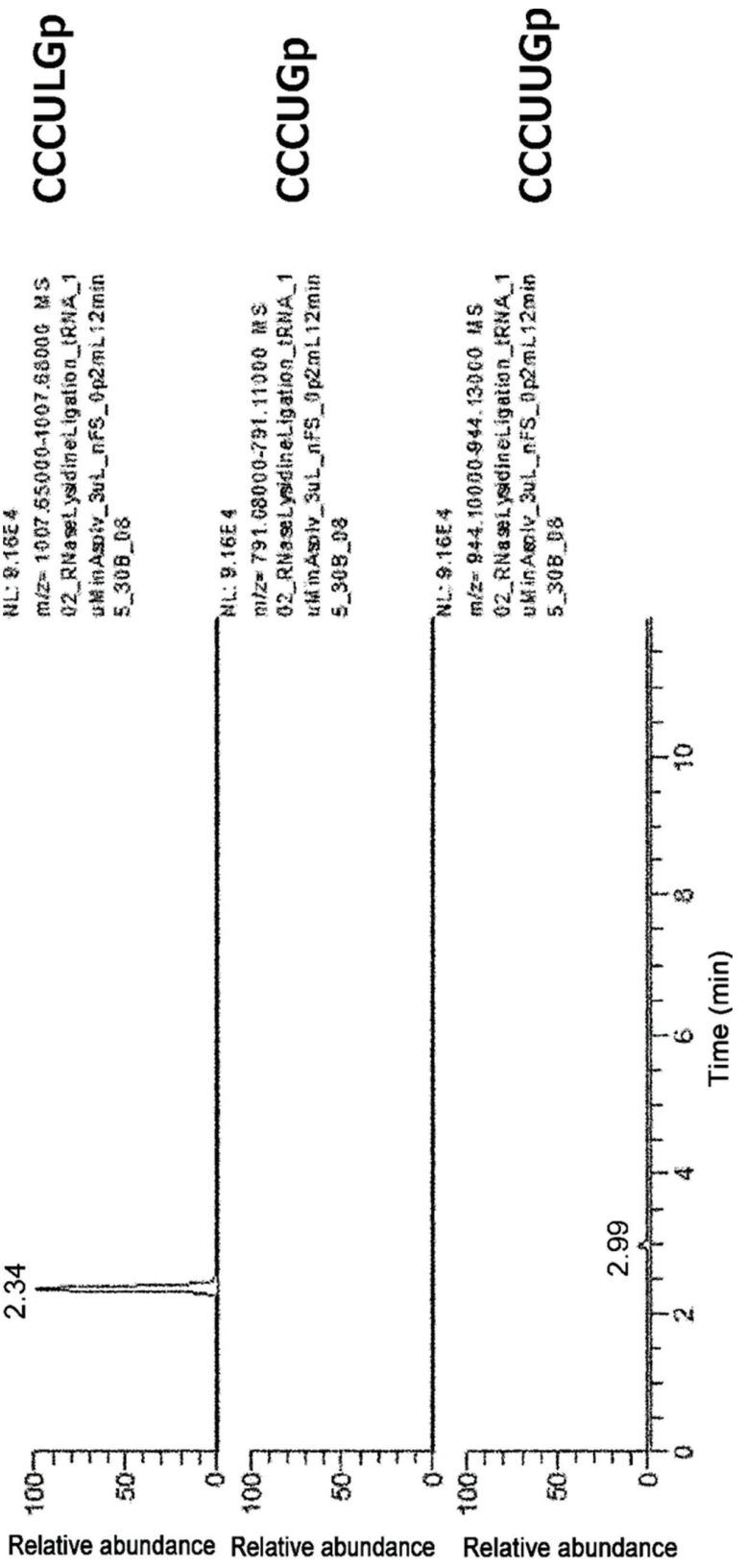

CCCULGp
NL: 9.16E4
m/z= 1007.65000-1007.68000 MS
02_RNaseLysdineLigation_tRNA_1
uMinAssiv_3uL_nFS_0p2mL12min
5_308_08
CCCUGp
NL: 9.16E4
m/z= 791.68000-791.11000 MS
02_RNaseLysdineLigation_tRNA_1
uMinAssiv_3uL_nFS_0p2mL12min
5_308_08
CCCUUGp
NL: 9.16E4
m/z= 944.10000-944.13000 MS
02_RNaseLysdineLigation_tRNA_1
uMinAssiv_3uL_nFS_0p2mL12min
5_308_08
2.34
2.99
100
50
0
Relative abundance
Relative abundance
Relative abundance
0
2
4
6
8
10
Time (min)

FIG. 2

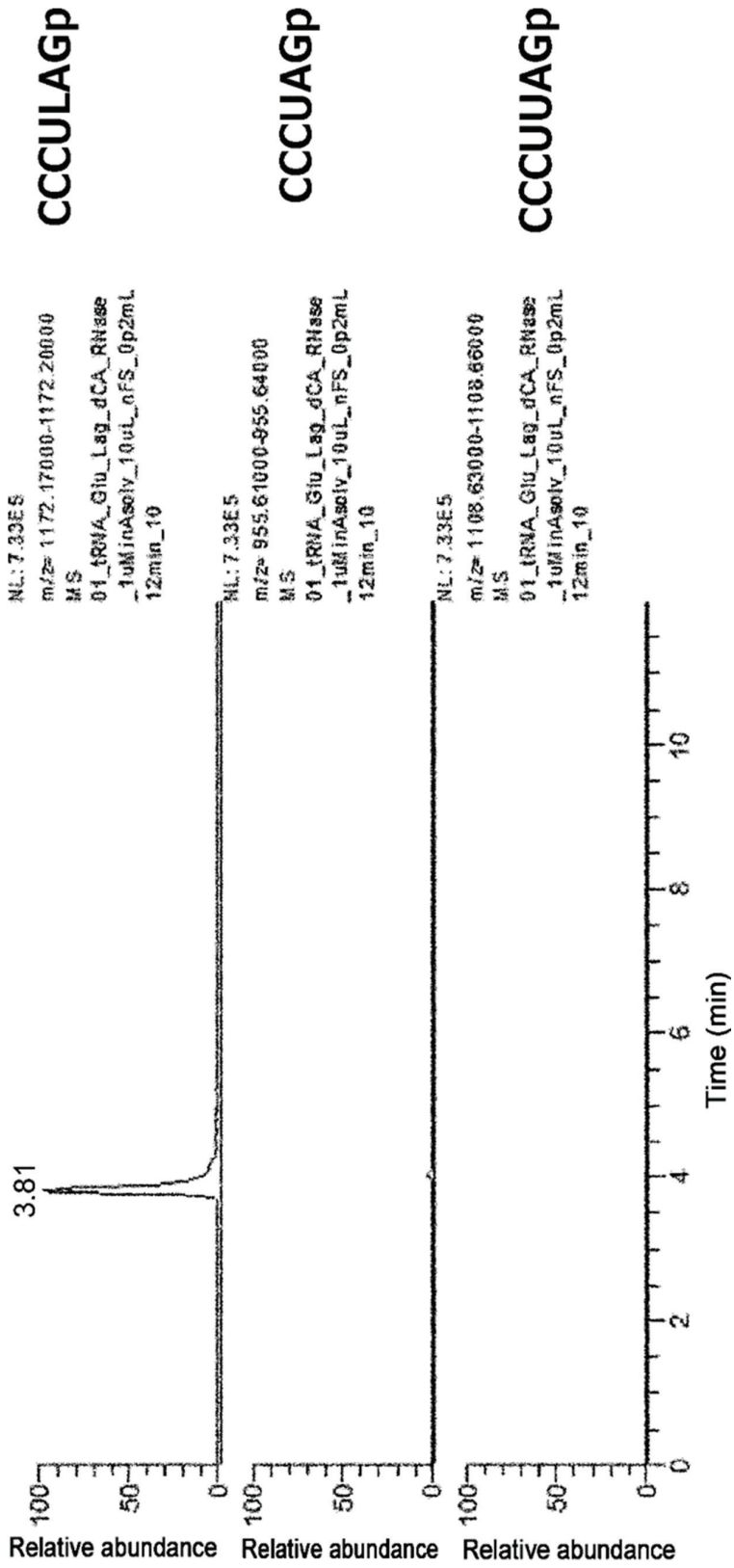

CCCULAGp
NL: 7.33E5
m/z= 1172.17000-1172.20000
MS
01_tRNA_Glu_Lag_dCA_RNase_1uMinAsolv_10uL_nFS_0p2mL_12min_10
3.81
CCCUAGp
NL: 7.33E5
m/z= 955.61000-955.64000
MS
01_tRNA_Glu_Lag_dCA_RNase_1uMinAsolv_10uL_nFS_0p2mL_12min_10
CCCUUAGp
NL: 7.33E5
m/z= 1108.63000-1108.66000
MS
01_tRNA_Glu_Lag_dCA_RNase_1uMinAsolv_10uL_nFS_0p2mL_12min_10
Relative abundance
Relative abundance
Relative abundance
100
50
0
0
2
4
6
8
10
Time (min)

FIG. 3

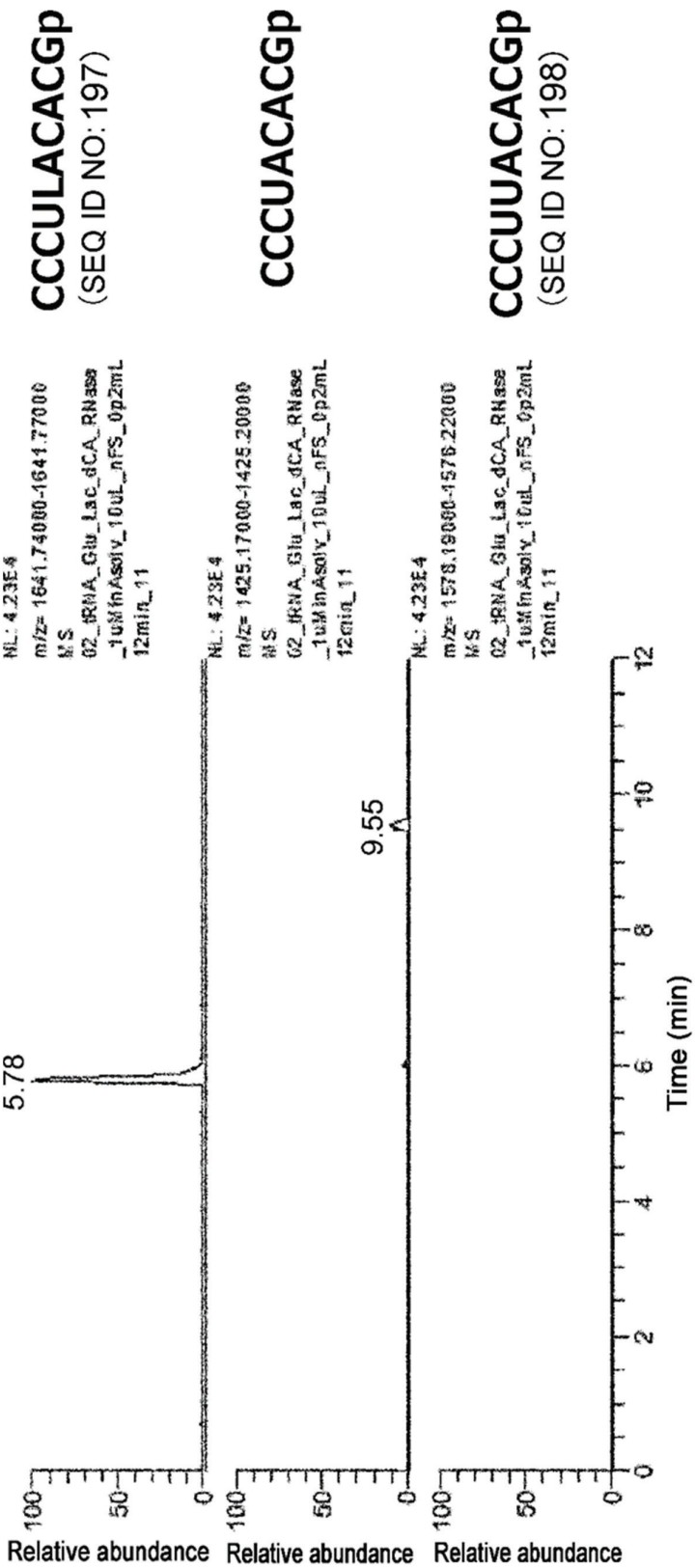
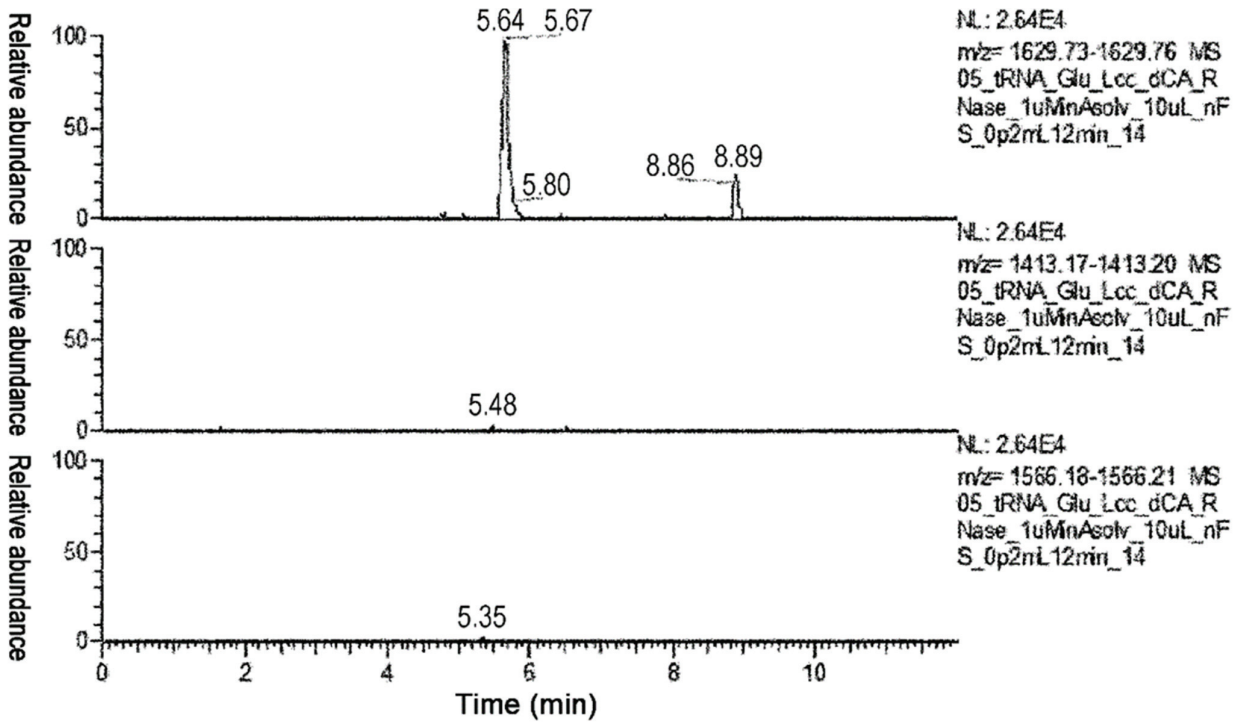

CCCULACACGp
(SEQ ID NO: 197)
CCCUACACGp
CCCUUACACGp
(SEQ ID NO: 198)
5.78
9.55
Relative abundance
Relative abundance
Relative abundance
Time (min)

FIG. 4



CCCULCCACGp
(SEQ ID NO: 199)

CCCUCCACGp

CCCUUCCACGp
(SEQ ID NO: 200)

FIG. 5

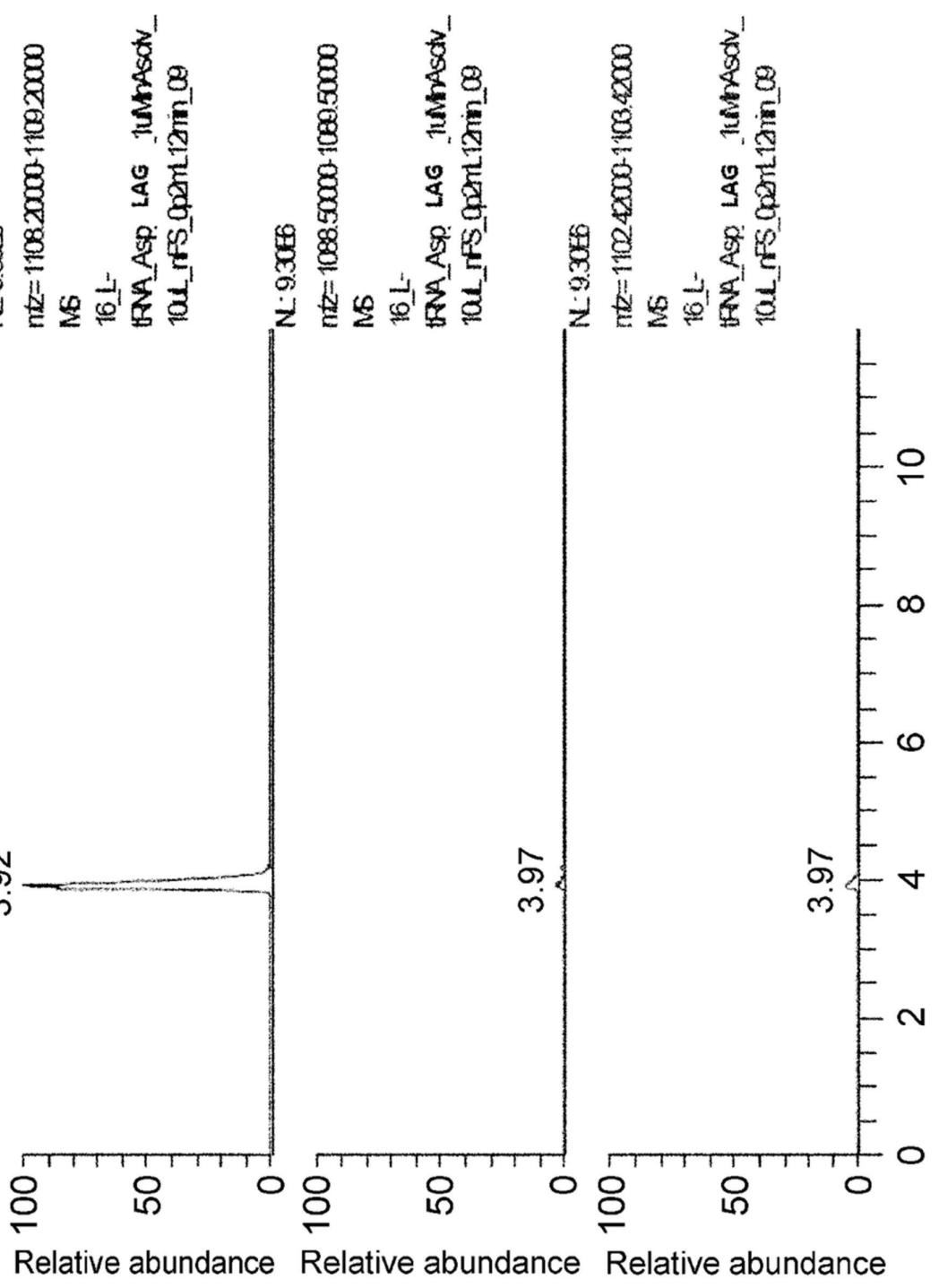

3.92
3.97
3.97
Relative abundance
Relative abundance
Relative abundance
100
50
0
0
2
4
6
8
10
Time (min)

FIG. 6

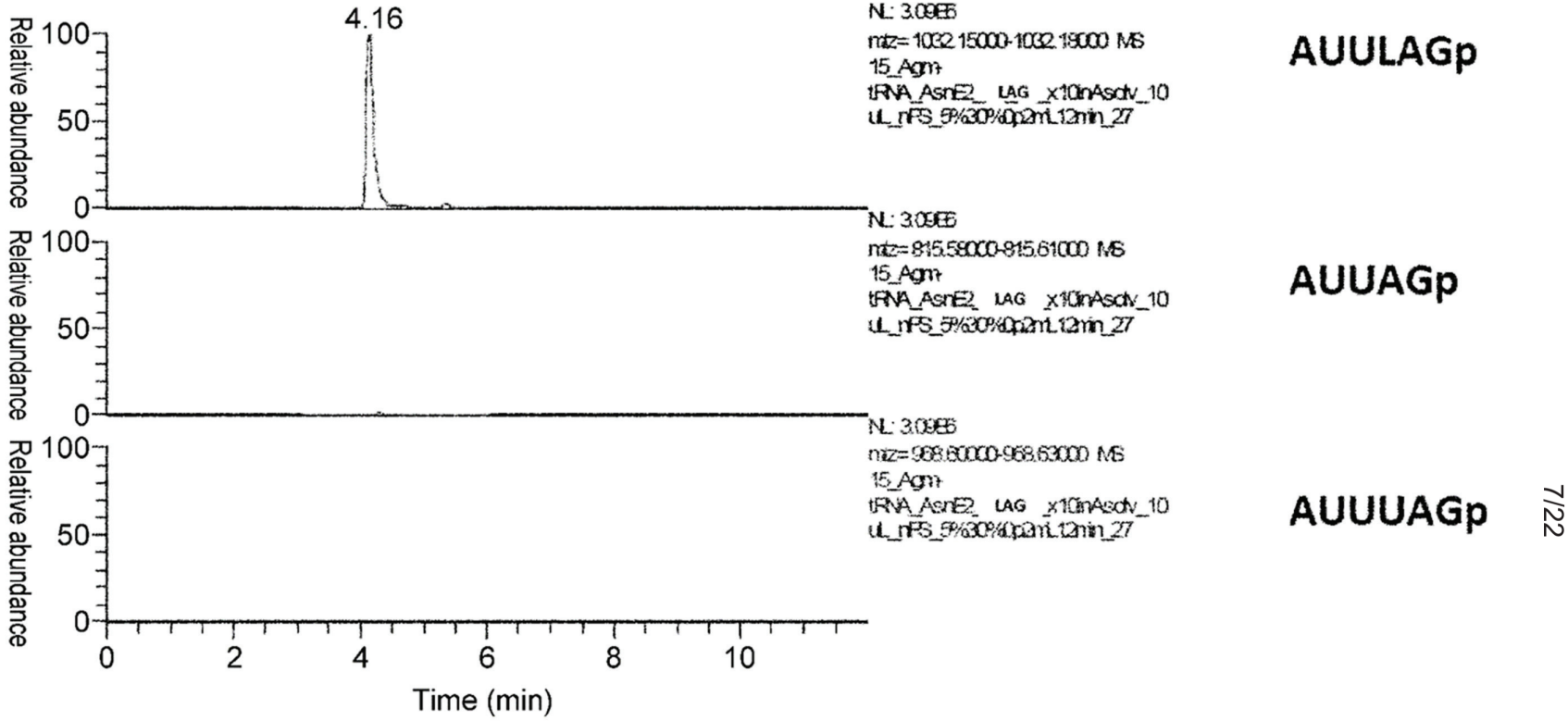

4.16
NL: 3.09E5
m/z= 1032.15000-1032.18000 MS
15_Agm
tRNA_AsnE2_ UAG _x10nAscIv_10
uL_nPS_5%30%0p2mL12min_27
AUULAGp
NL: 3.09E5
m/z= 815.58000-815.61000 MS
15_Agm
tRNA_AsnE2_ UAG _x10nAscIv_10
uL_nPS_5%20%0p2mL12min_27
AUUAGp
NL: 3.09E5
m/z= 968.60000-968.63000 MS
15_Agm
tRNA_AsnE2_ UAG _x10nAscIv_10
uL_nPS_5%30%0p2mL12min_27
AUUUAGp
Relative abundance
100
50
0
0
2
4
6
8
10
Time (min)

FIG. 7

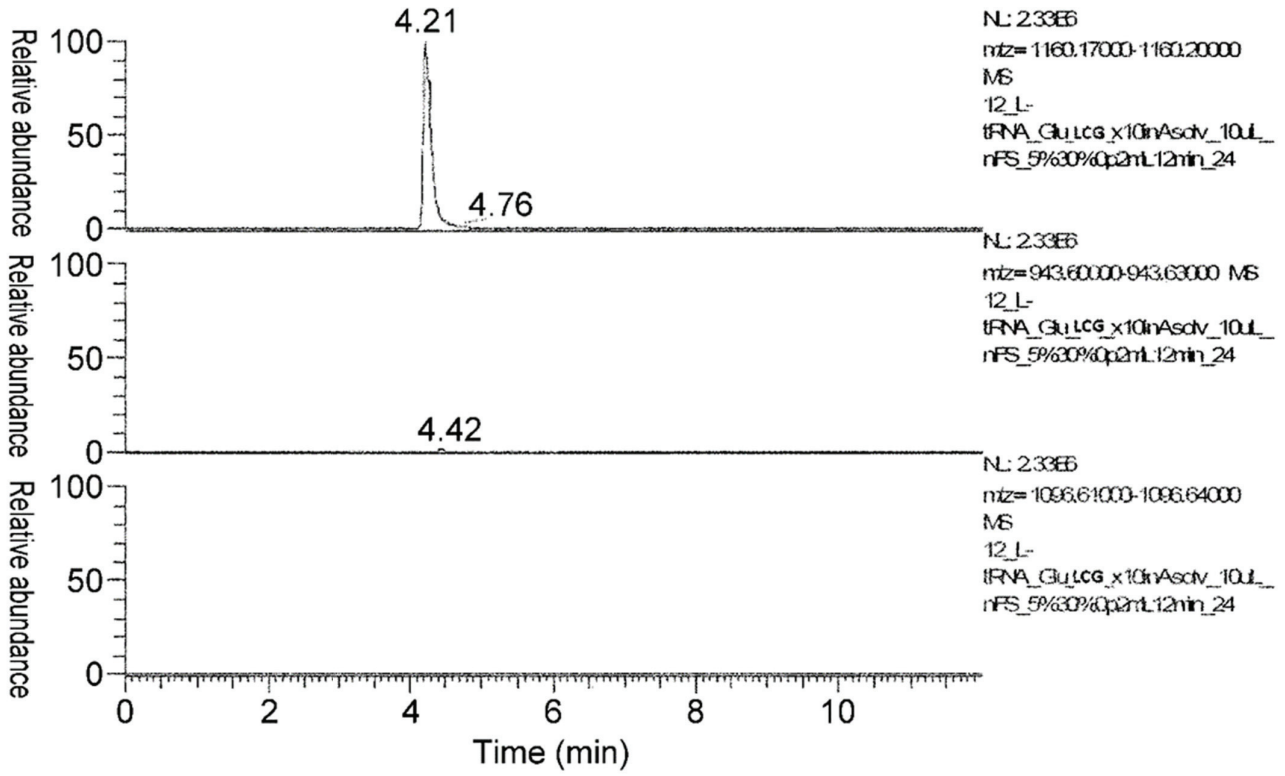

4.21
4.76
4.42
Relative abundance
Relative abundance
Relative abundance
100
50
0
0
2
4
6
8
10
Time (min)
NL: 2.33E6
m/z= 1160.17000-1160.20000
MS
12_L-
tRNA_Glu_LCG_x10inAcdv_10uL_
nFS_5%30%0p2mL12min_24
NL: 2.33E6
m/z= 943.60000-943.63000 MS
12_L-
tRNA_Glu_LCG_x10inAcdv_10uL_
nFS_5%30%0p2mL12min_24
NL: 2.33E6
m/z= 1096.61000-1096.64000
MS
12_L-
tRNA_Glu_LCG_x10inAcdv_10uL_
nFS_5%30%0p2mL12min_24
CCCULCGp
CCCUCGp
CCCUUCGp

FIG. 8

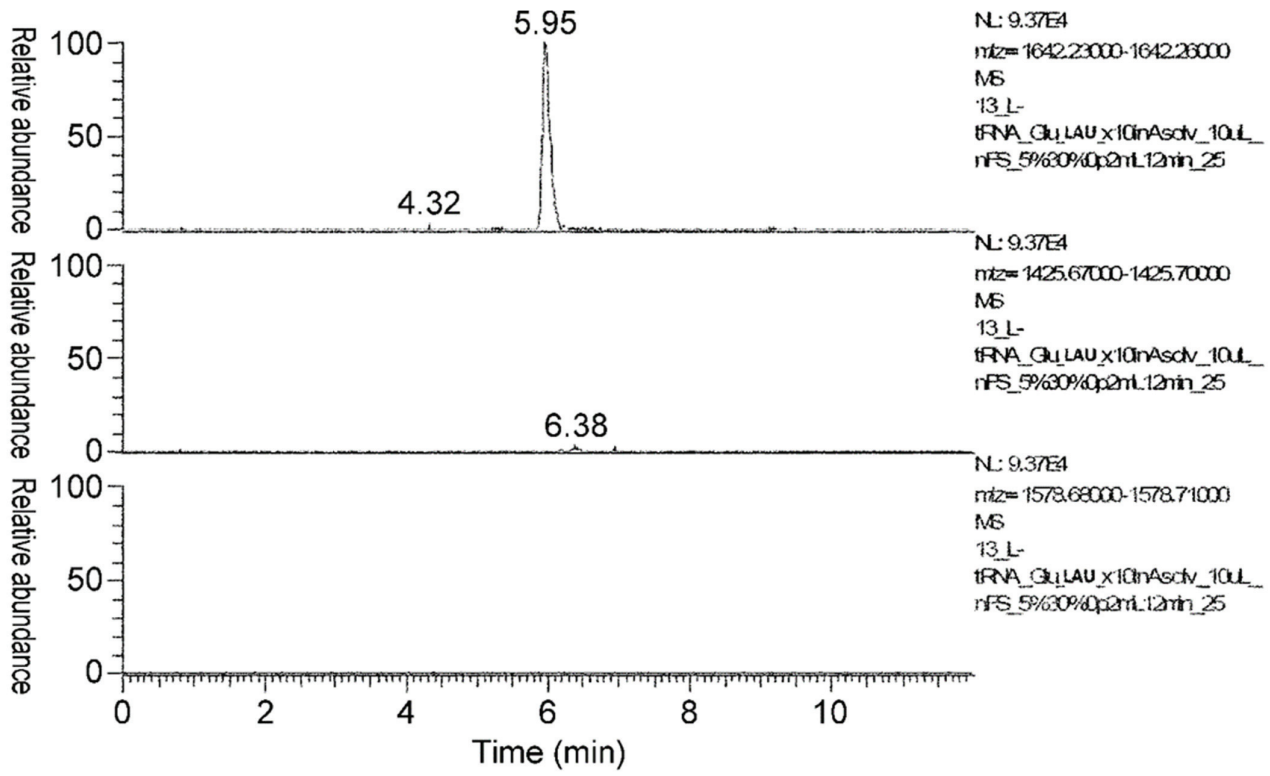

5.95
4.32
6.38
Relative abundance
100
50
0
NL: 9.37E4
m/z= 1642.23000-1642.26000
MS
13_L-
tRNA_Glu_LAU_x10inAscIv_10uL_
nFS_5%30%0p2mL12min_25
NL: 9.37E4
m/z= 1425.67000-1425.70000
MS
13_L-
tRNA_Glu_LAU_x10inAscIv_10uL_
nFS_5%30%0p2mL12min_25
NL: 9.37E4
m/z= 1578.68000-1578.71000
MS
13_L-
tRNA_Glu_LAU_x10inAscIv_10uL_
nFS_5%30%0p2mL12min_25
0
2
4
6
8
10
Time (min)
CCCULAUACGp
(SEQ ID NO: 202)
CCCUAUACGp
CCCUUAUACGp
(SEQ ID NO: 203)

FIG. 9

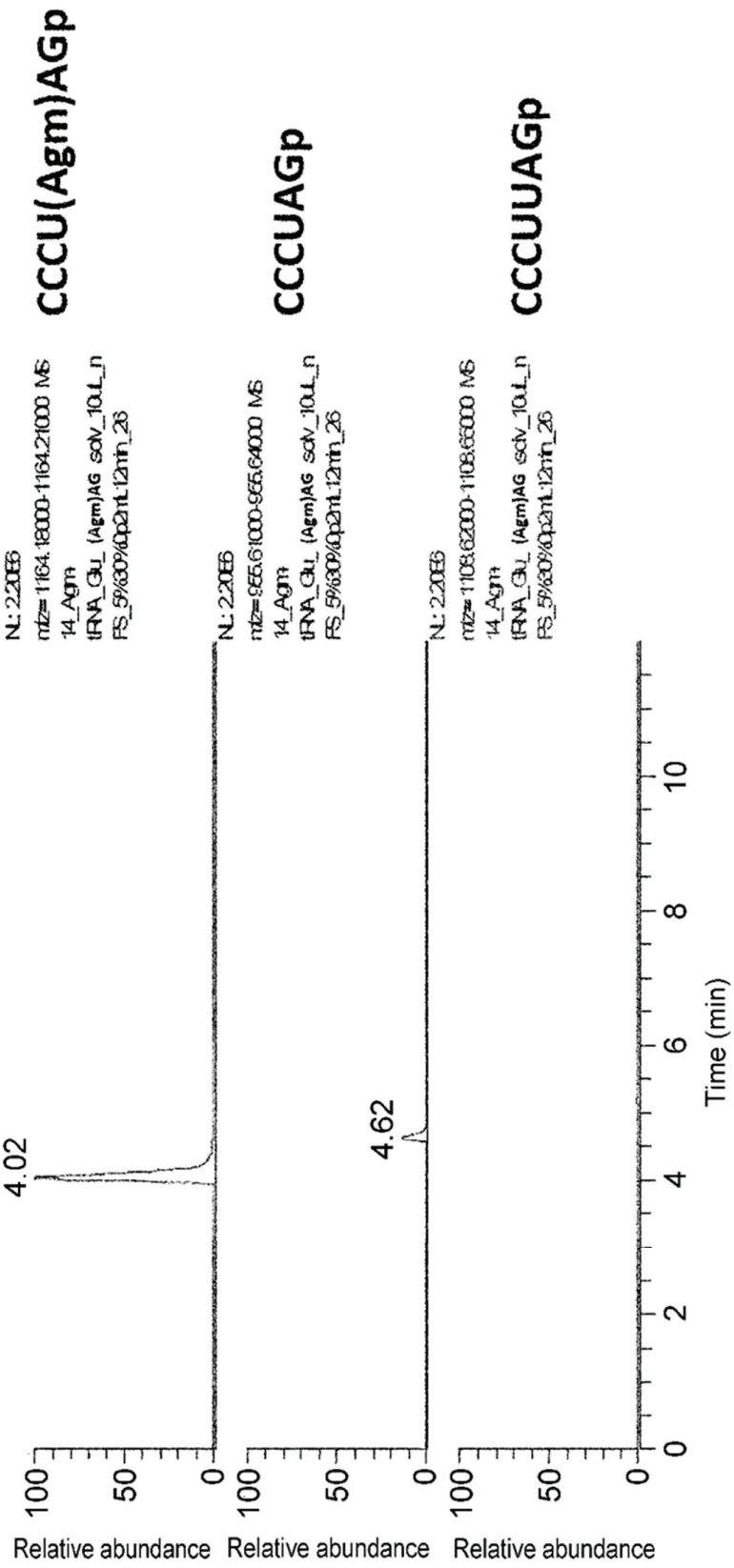

CCCU(Agm)AGp
CCCUAGp
CCCUUAGp
4.02
4.62
Relative abundance
Relative abundance
Relative abundance
100
50
0
0
2
4
6
8
10
Time (min)

FIG. 10

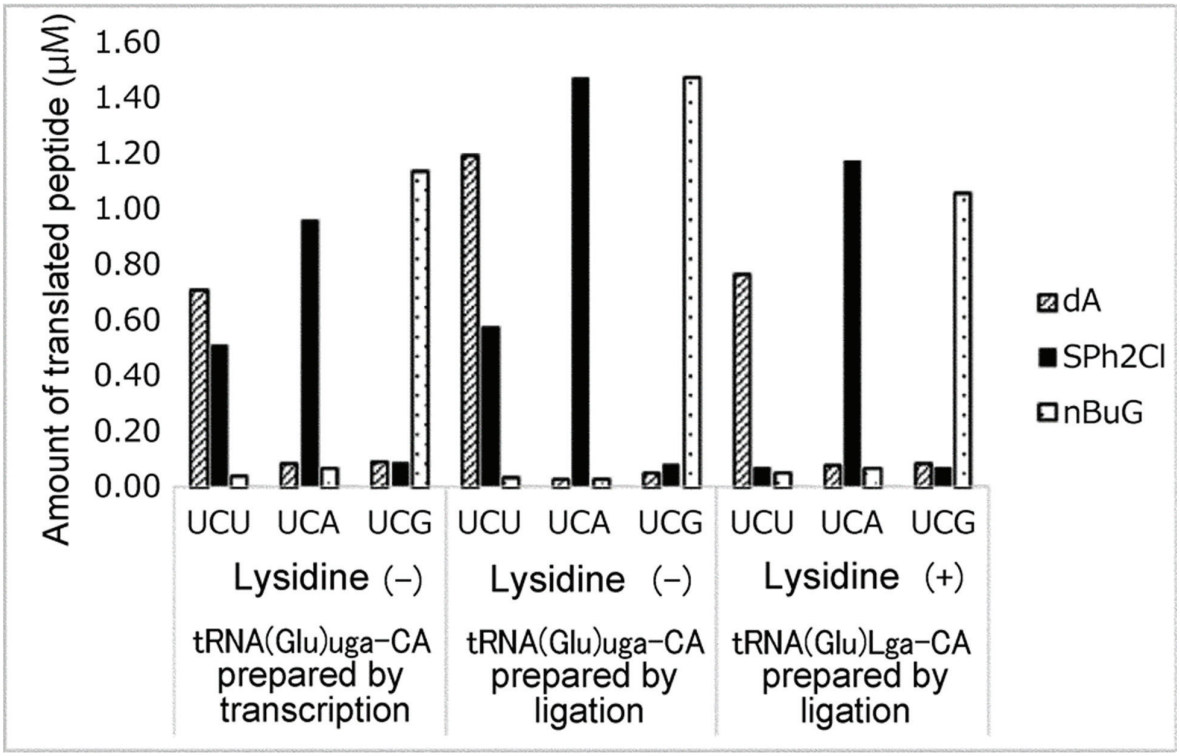

Amount of translated peptide (μM)
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
UCU UCA UCG UCU UCA UCG UCU UCA UCG
Lysidine (–)
Lysidine (–)
Lysidine (+)
tRNA(Glu)uga-CA prepared by transcription
tRNA(Glu)uga-CA prepared by ligation
tRNA(Glu)Lga-CA prepared by ligation
dA
SPh2Cl
nBuG

FIG. 11

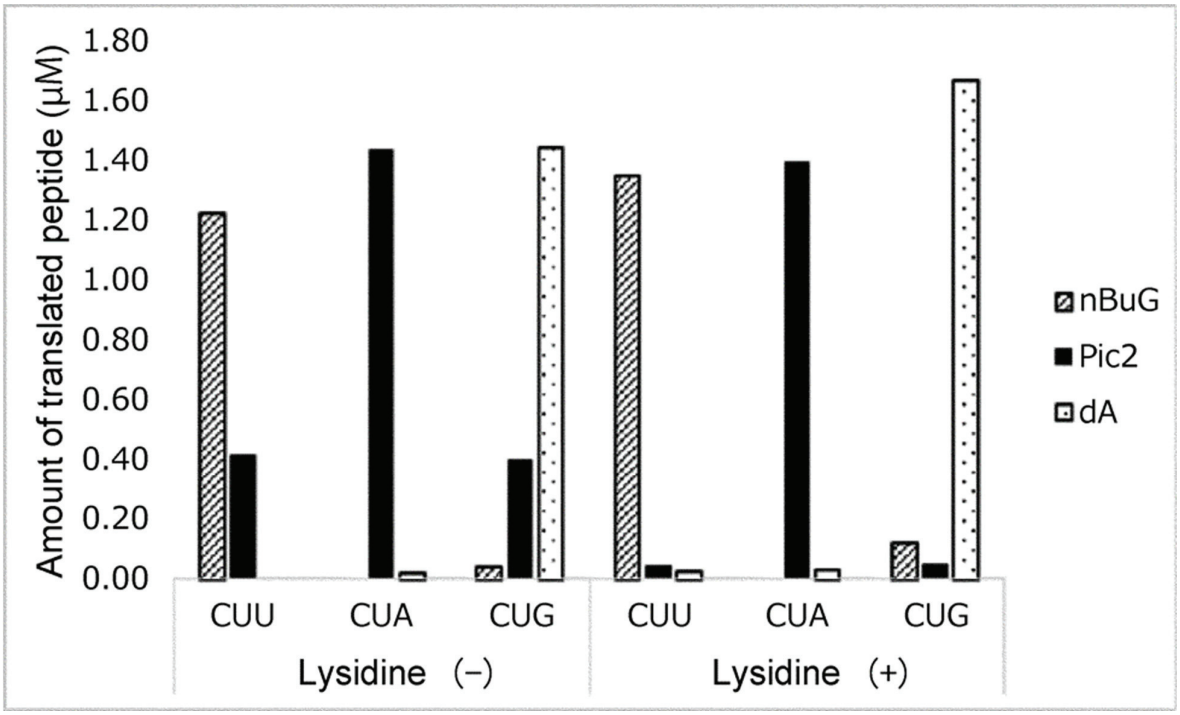

Amount of translated peptide (μM)
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
CUU
CUA
CUG
CUU
CUA
CUG
Lysidine (−)
Lysidine (+)
nBuG
Pic2
dA

FIG. 12

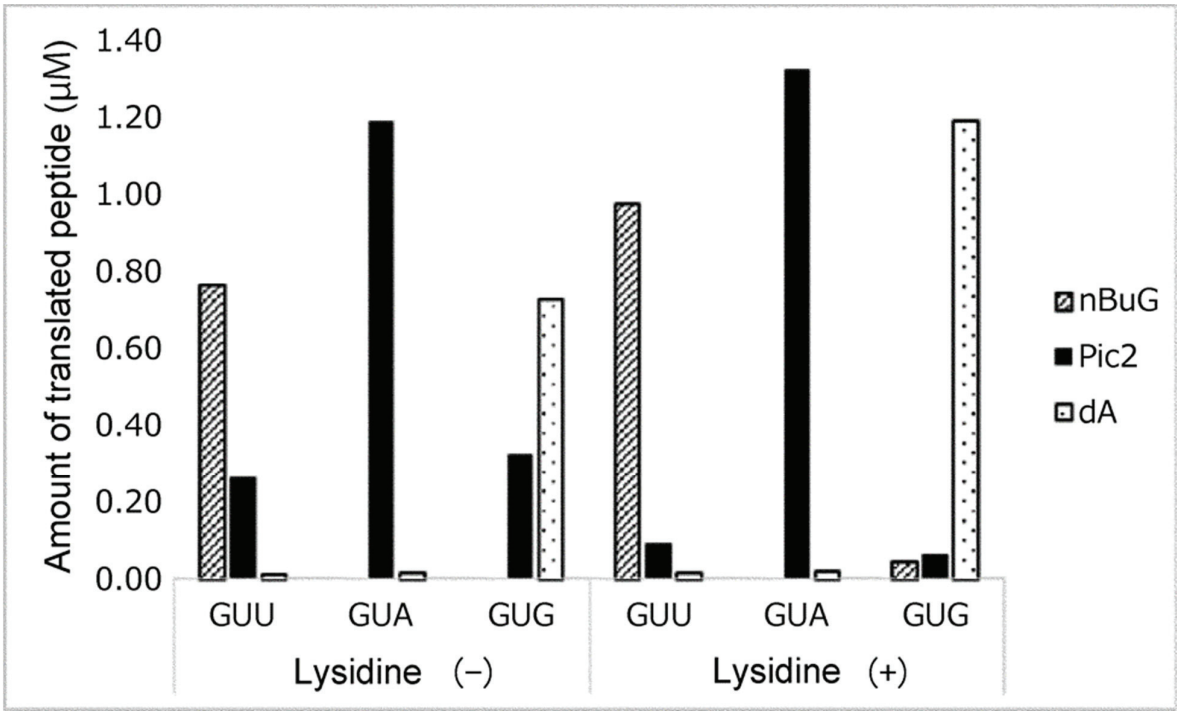

Amount of translated peptide (μM)
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
GUU
GUA
GUG
GUU
GUA
GUG
Lysidine (−)
Lysidine (+)
nBuG
Pic2
dA

FIG. 13

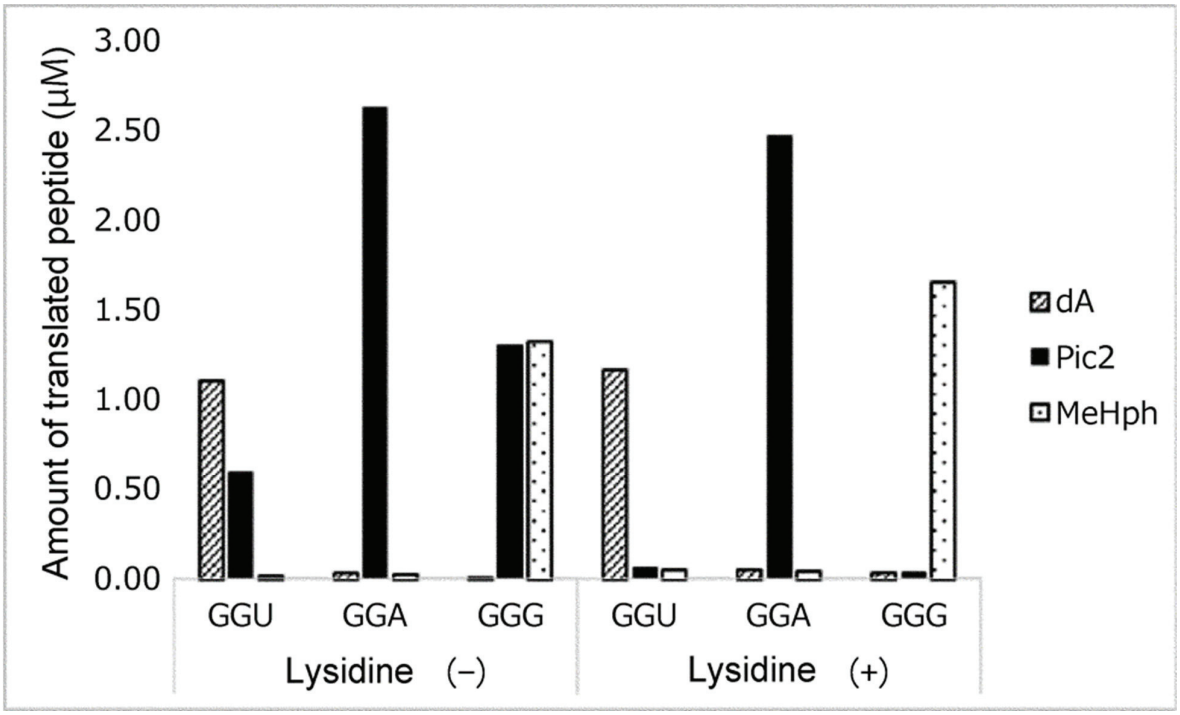

Amount of translated peptide (μM)
3.00
2.50
2.00
1.50
1.00
0.50
0.00
GGU
GGA
GGG
GGU
GGA
GGG
Lysidine (–)
Lysidine (+)
dA
Pic2
MeHph

FIG. 14

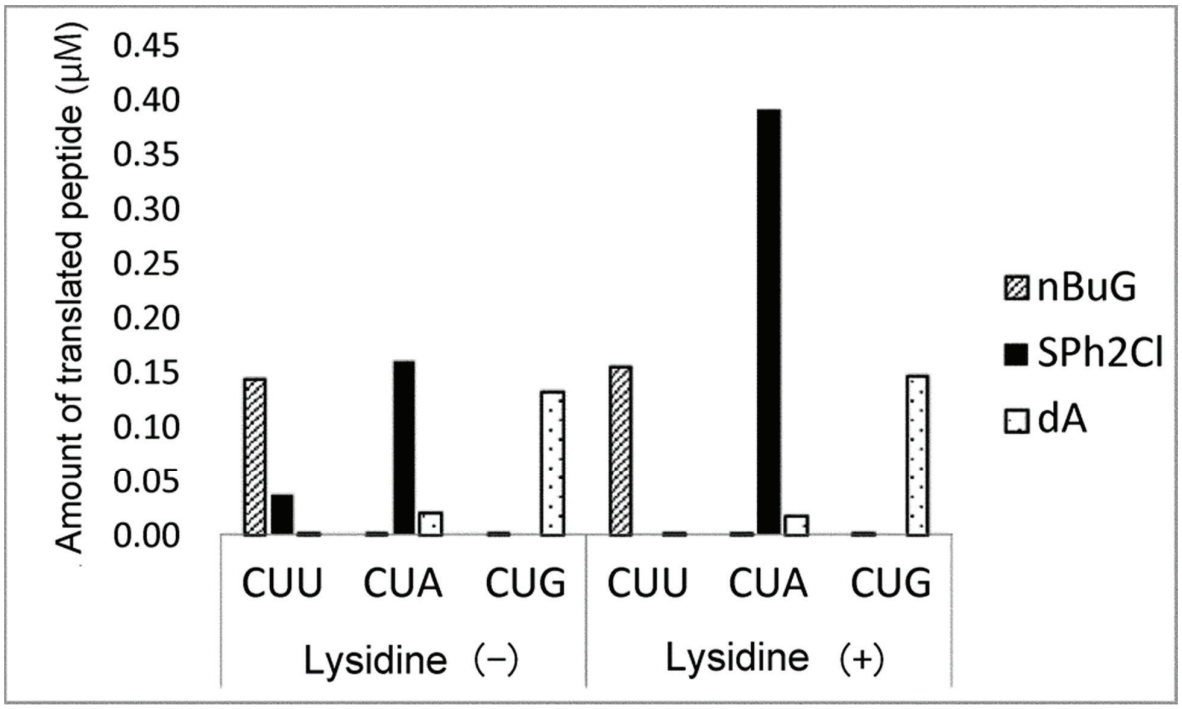

Amount of translated peptide (μM)
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
nBuG
SPh2Cl
dA
CUU
CUA
CUG
CUU
CUA
CUG
Lysidine (−)
Lysidine (+)

FIG. 15

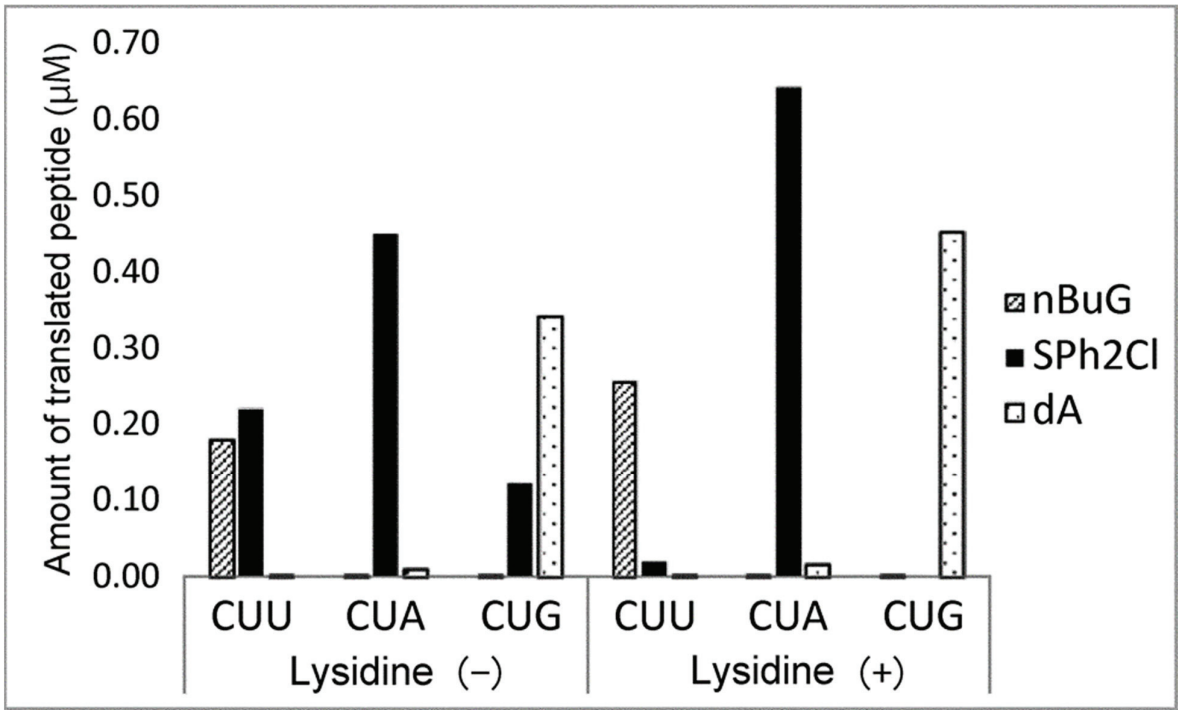

Amount of translated peptide (μM)
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
CUU
CUA
CUG
Lysidine (−)
CUU
CUA
CUG
Lysidine (+)
nBuG
SPh2Cl
dA

FIG. 16

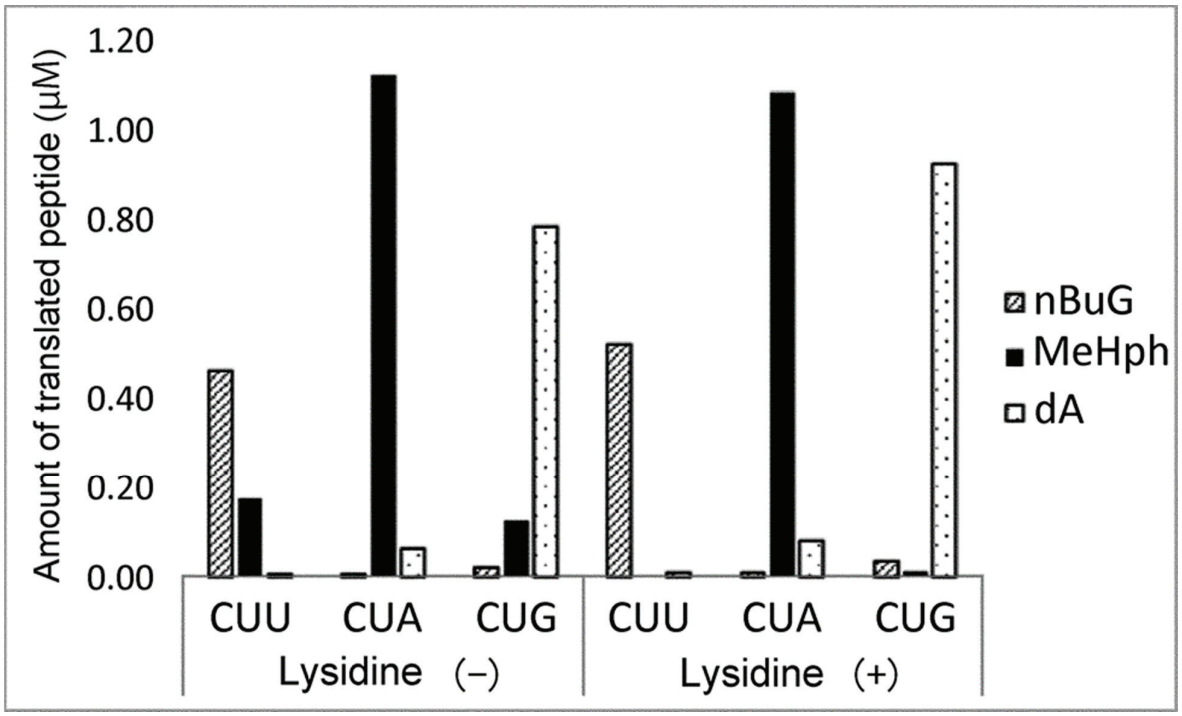

Amount of translated peptide (μM)
1.20
1.00
0.80
0.60
0.40
0.20
0.00
CUU
CUA
CUG
Lysidine (–)
CUU
CUA
CUG
Lysidine (+)
nBuG
MeHph
dA

FIG. 17

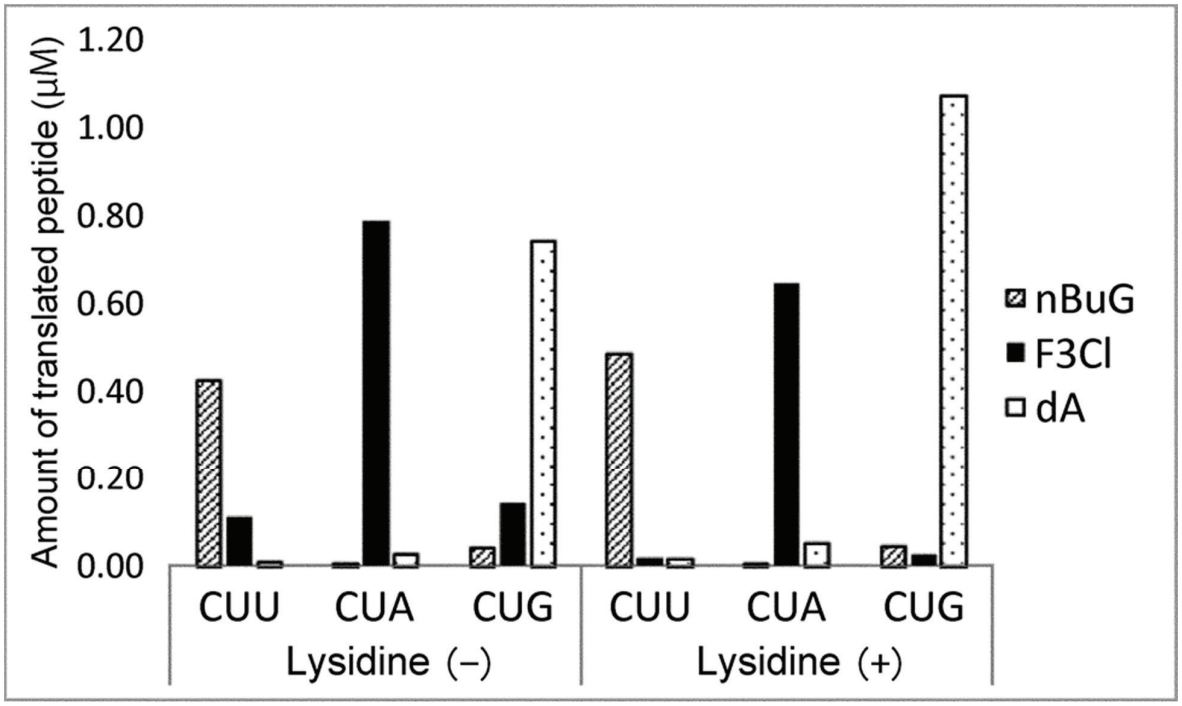

Amount of translated peptide (μM)
1.20
1.00
0.80
0.60
0.40
0.20
0.00
CUU
CUA
CUG
CUU
CUA
CUG
Lysidine (–)
Lysidine (+)
nBuG
F3Cl
dA

FIG. 18

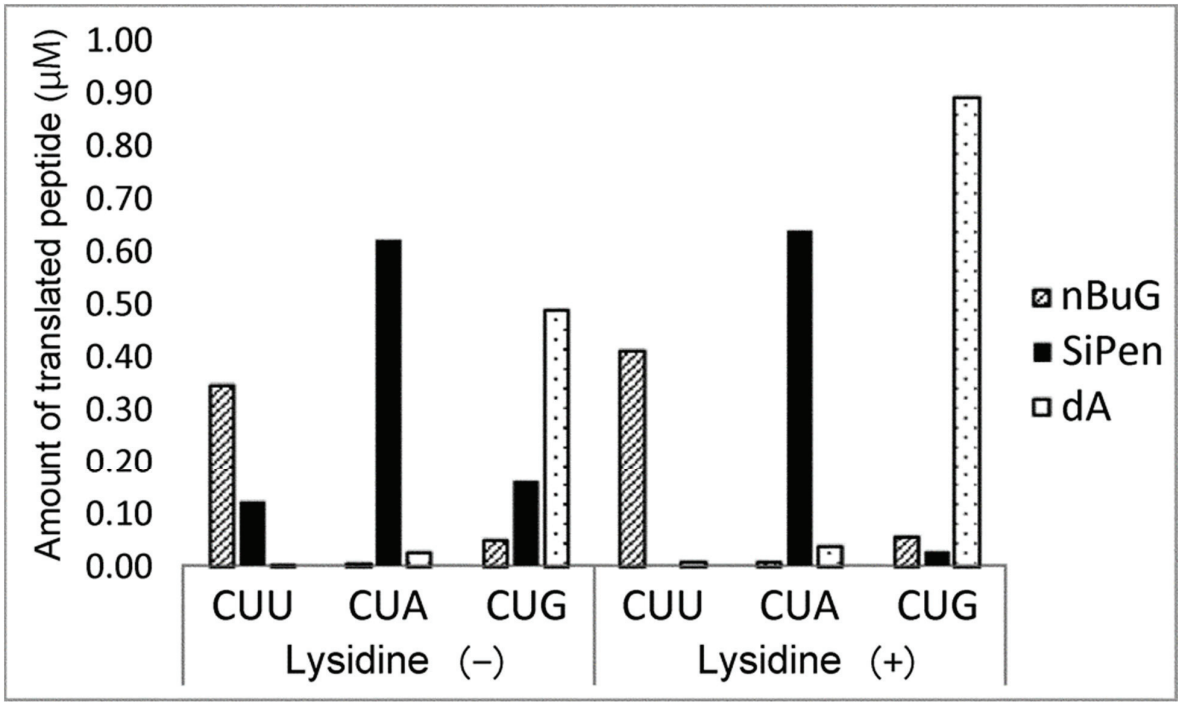

Amount of translated peptide (μM)
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
CUU
CUA
CUG
Lysidine (–)
CUU
CUA
CUG
Lysidine (+)
nBuG
SiPen
dA

FIG. 19

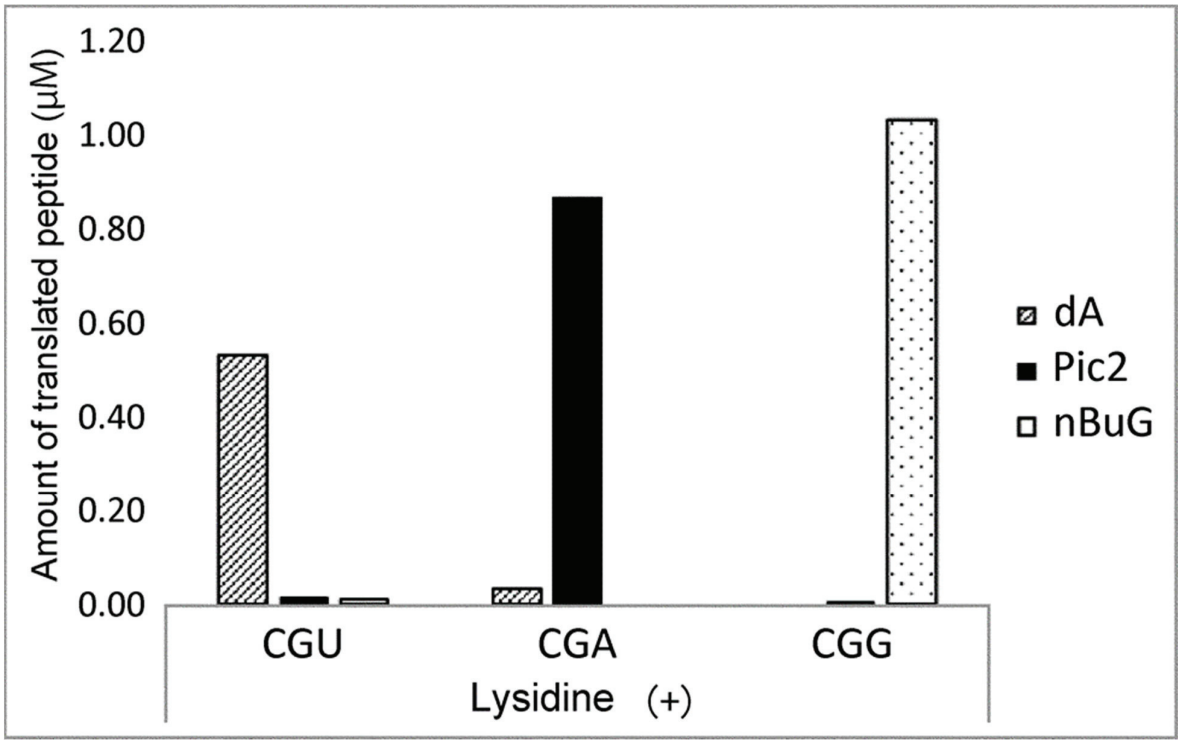

Amount of translated peptide (μM)
1.20
1.00
0.80
0.60
0.40
0.20
0.00
CGU
CGA
CGG
Lysidine (+)
dA
Pic2
nBuG

FIG. 20

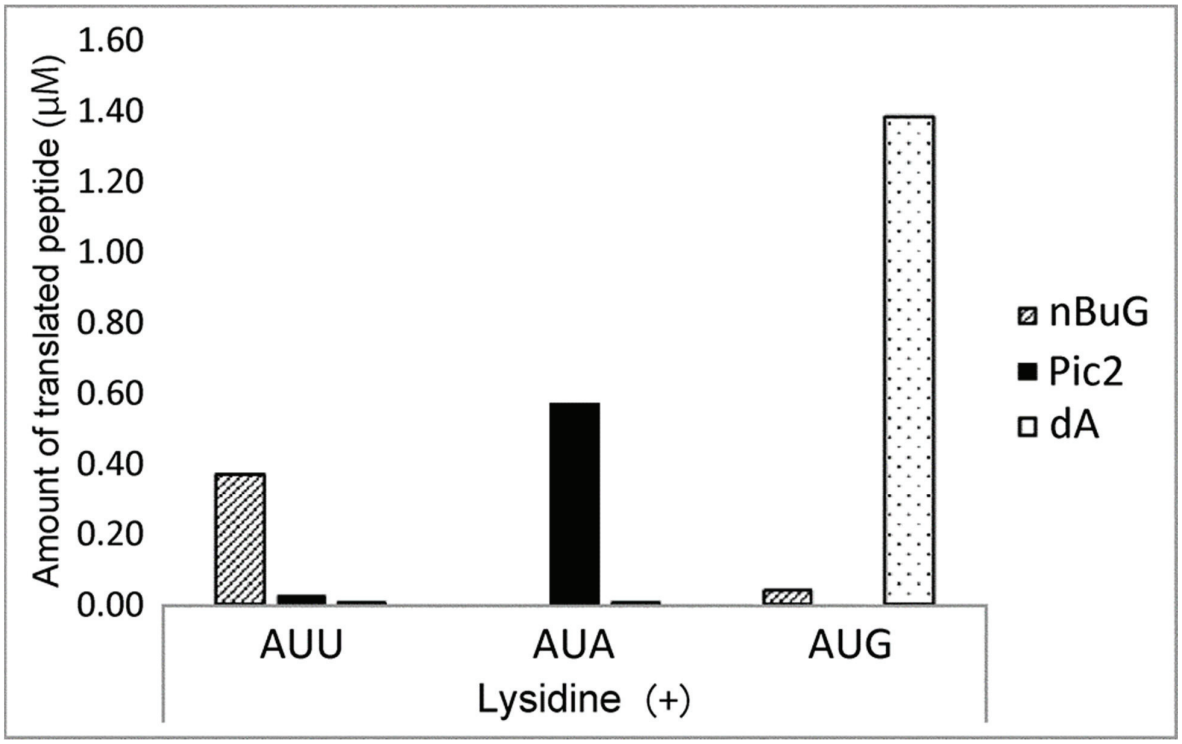

Amount of translated peptide (μM)
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
AUU
AUA
AUG
Lysidine (+)
nBuG
Pic2
dA

FIG. 21

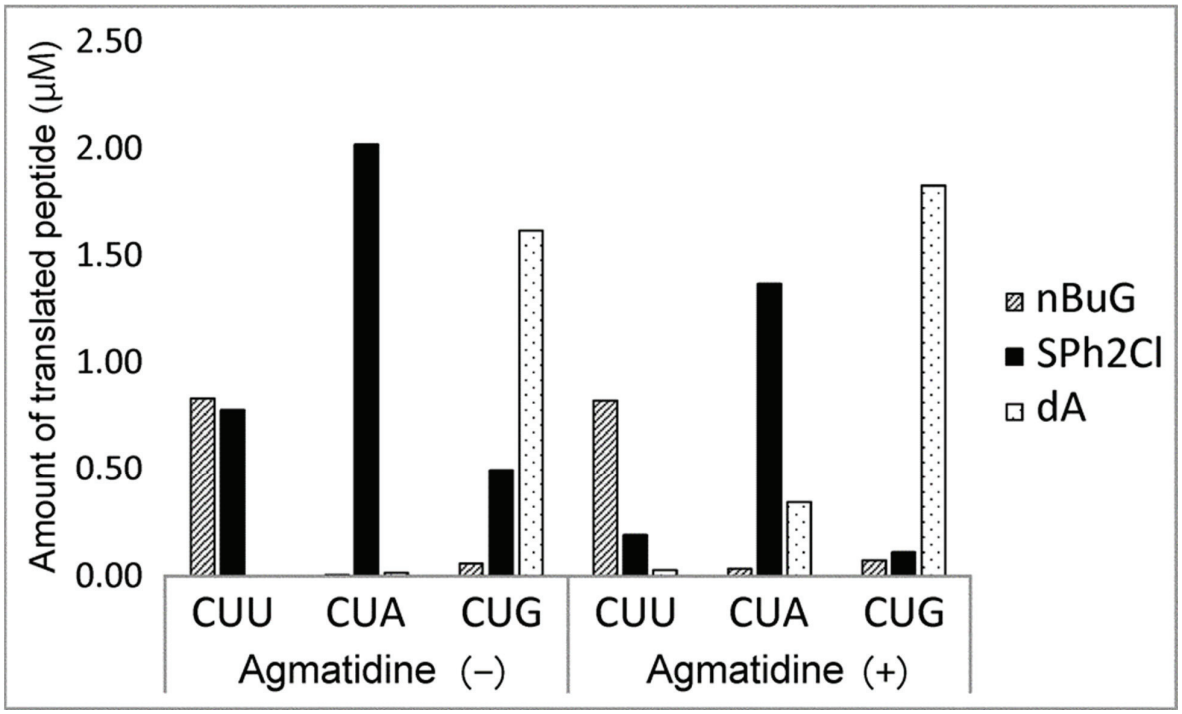

Amount of translated peptide (μM)
2.50
2.00
1.50
1.00
0.50
0.00
CUU
CUA
CUG
CUU
CUA
CUG
Agmatidine (–)
Agmatidine (+)
nBuG
SPh2Cl
dA

FIG. 22