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CGGGGCGCCGGCGCCGCCCGGGCGAGCGGCCCCGGCGGGGGCGCCCCGCG
GGGCCCGCACGGCGGCGCCGCCAGCGGCCUGAACGGGUGCUGCCGGUGCG
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UUCGCGACCCCGAUGGAGGCCGAGCUGGCCCGGCGGAGCCUGGCCCAGGA
CGCCCCGCCGCUGCCCGUGCCGGGCGUGCUCCUGAAGGAGUUCACGGUGA
GCGGCAACAUCCUGACCAUCCGGCUGACCGCCGCGGACCACCGGCAGCUG
CAGCUGUCGAUCAGCAGCUGCCUCCAGCAGCUGAGCCUGCUGAUGUGGAU
CACCCAGUGCUUCCUGCCGGUGUUCCUGGCCCAGCCGCCCAGCGGCCAGC
GCCGGUGACCACUAGUUAUAAGACUGACUAGCCCGAUGGGCCUCCCAACG
GGCCCUCCUCCCCCUCCUUGCACCGAGAUUAAUAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAUGCA
UCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCAAAGGCUCUUUUCAGAGC
CACCAGAAUU

Fig. 1

GGGAGAAAGCUUACCAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGC
GCCCUUCUACCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGG
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CUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCG
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CCGGACCGCCUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCA
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GGCUUCGGCAUGUUCACGACCCUGGGCUACCUCAUCUGCGGCUUCCGGGU
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CGCCAGCGGGGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCA
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AGCUCGACGCCCGGAAGAUCCGCGAGAUCCUGAUCAAGGCCAAGAAGGGC
GGCAAGAUCGCCGUGUGAGGACUAGUUAUAAGACUGACUAGCCCGAUGGG
CCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCGAGAUUAAUAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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UUUUCAGAGCCACCAGAAUU

Fig. 2

GGGAGAAAGCUUACCAUGAAGGCCGUGCUGCUCGCGCUGCUGAUGGCCGG
CCUGGCCCUGCAGCCGGGGACCGCCCUGCUGUGCUACAGCUGCAAGGCCC
AGGUCUCGAACGAGGACUGCCUGCAGGUGGAGAACUGCACGCAGCUGGGC
GAGCAGUGCUGGACCGCCCGGAUCCGCGCCGUGGGCCUGCUCACCGUGAU
CAGCAAGGGCUGCAGCCUGAACUGCGUGGACGACAGCCAGGACUACUACG
UGGGCAAGAAGAACAUCACCUGCUGCGACACCGACCUGUGCAACGCCAGC
GGCGCCCACGCCCUGCAGCCCGCGGCCGCCAUCCUGGCCCUGCUGCCCGC
CCUGGGCCUGCUGCUCUGGGGCCCCGGCCAGCUGUGACCACUAGUUAUAA
GACUGACUAGCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCA
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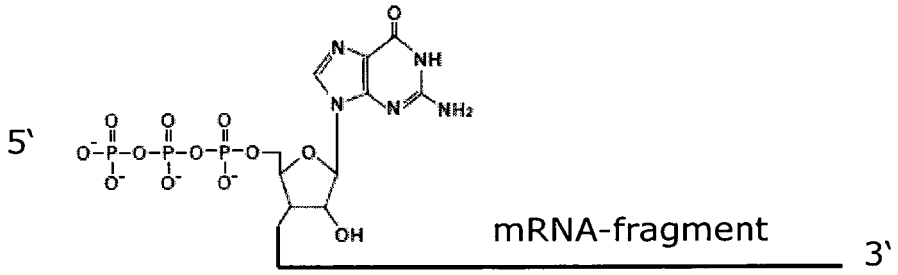
Fig. 3

A



B

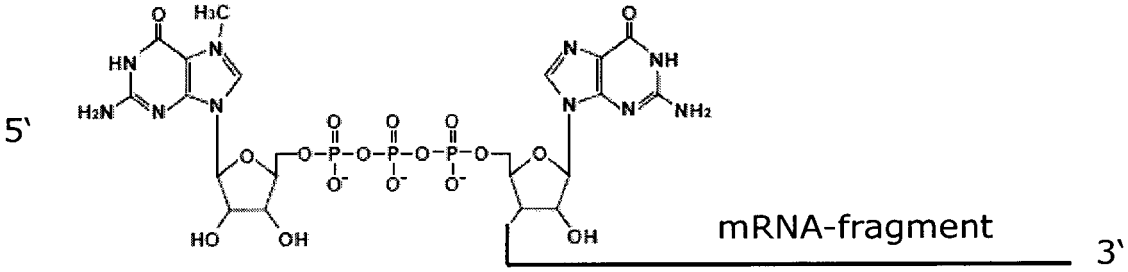


Fig. 4

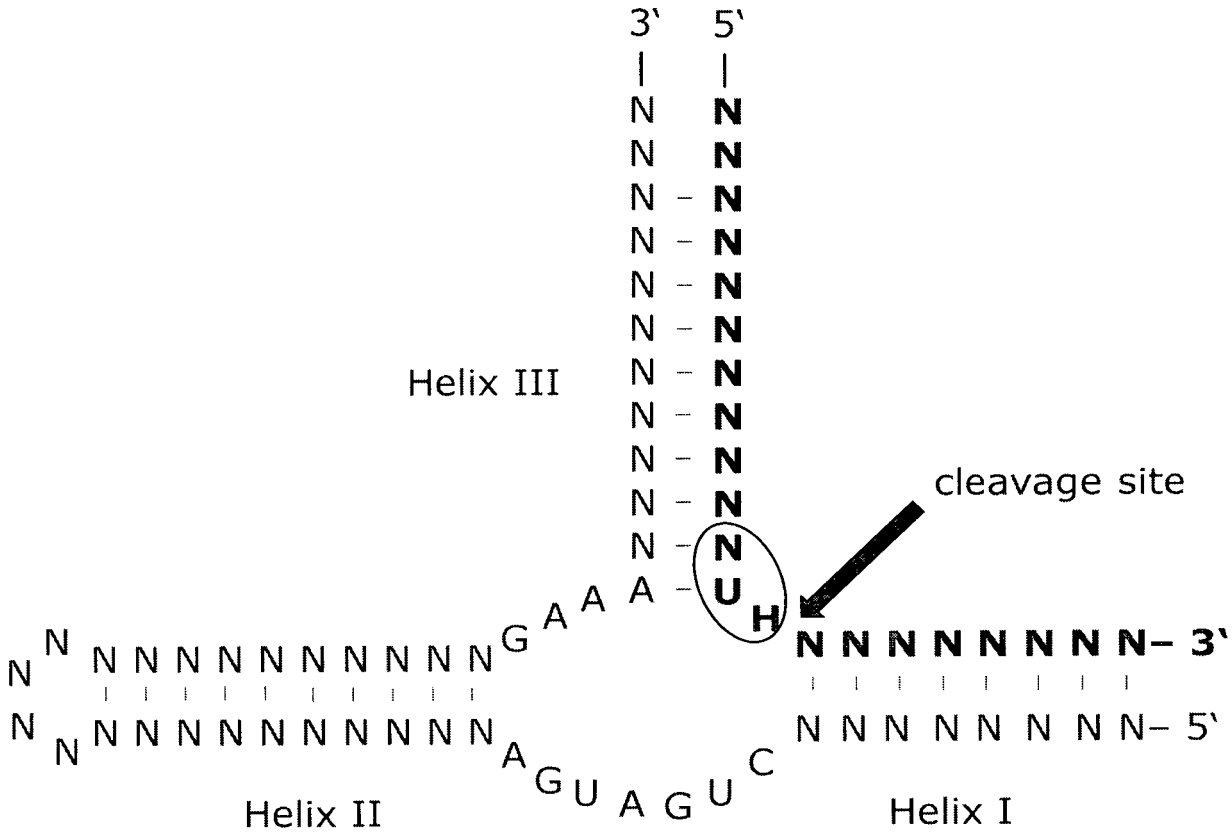


Fig. 5

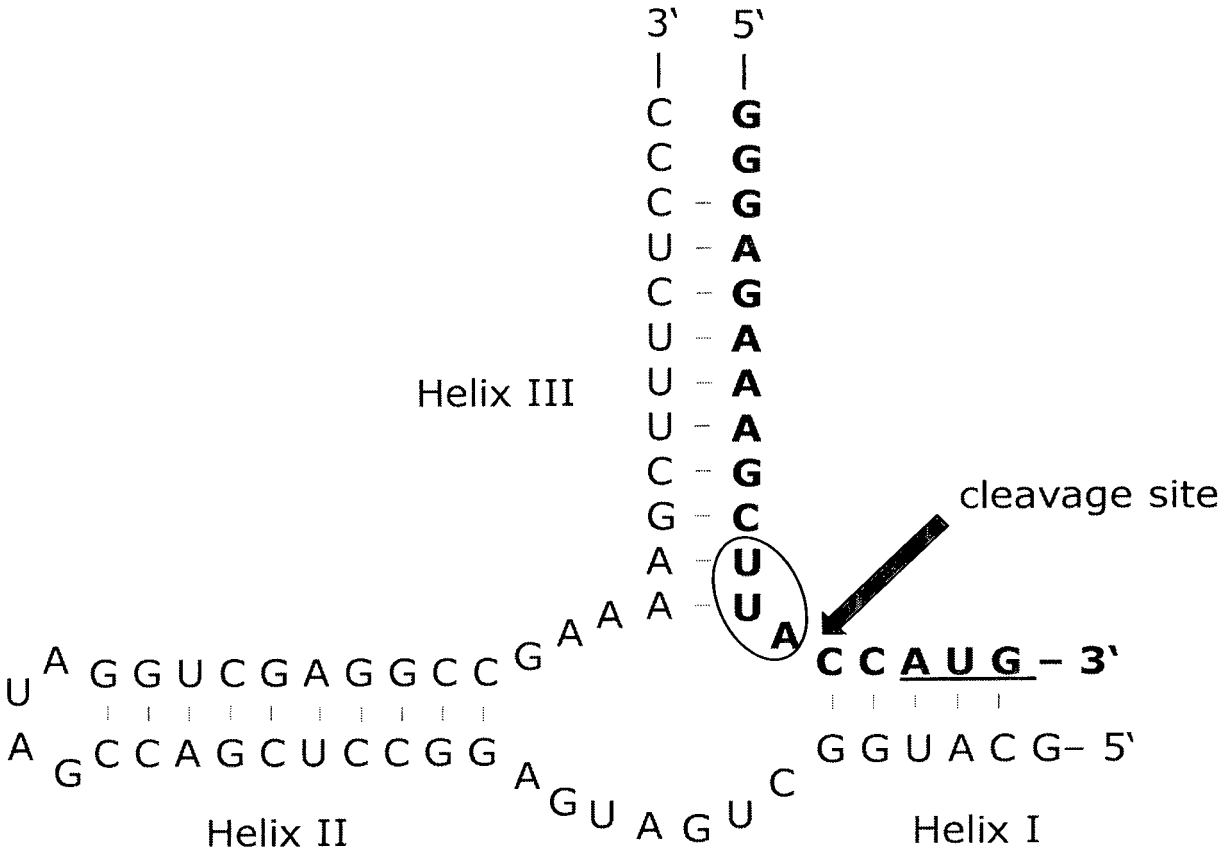
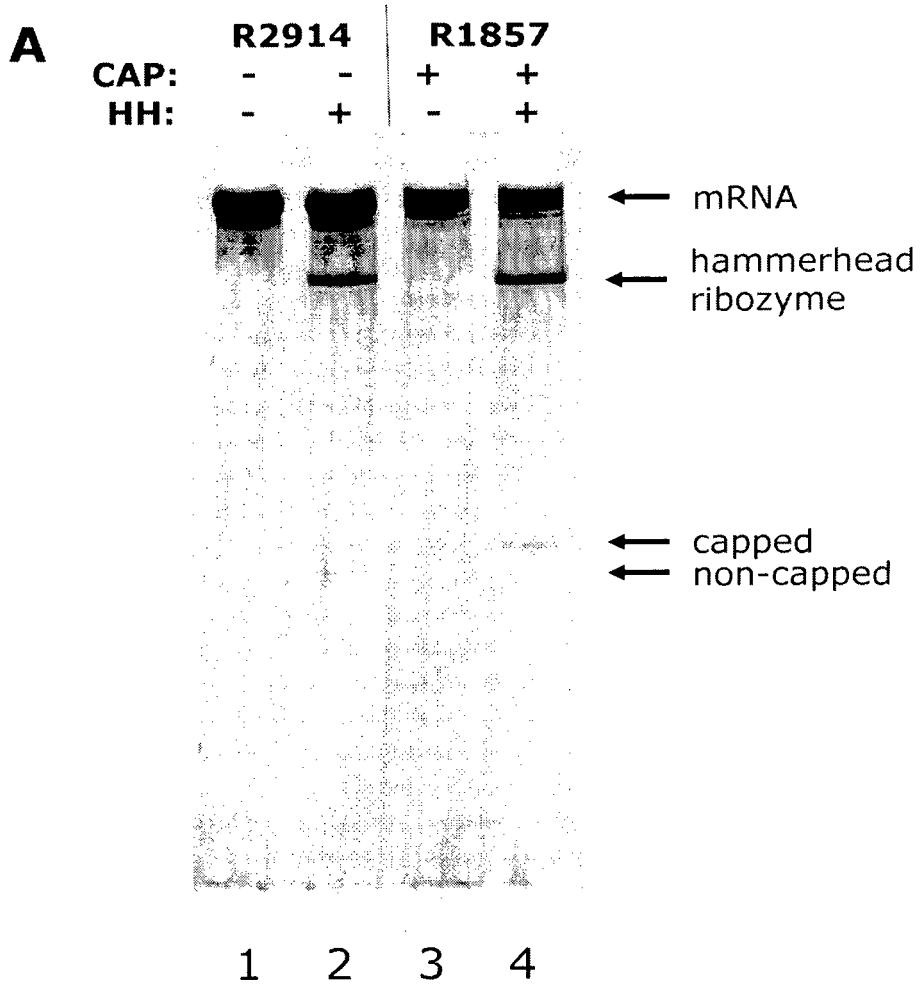


Fig. 6


A
R2914
R1857
CAP: - - + +
HH: - + - +
mRNA
hammerhead ribozyme
capped
non-capped
1 2 3 4

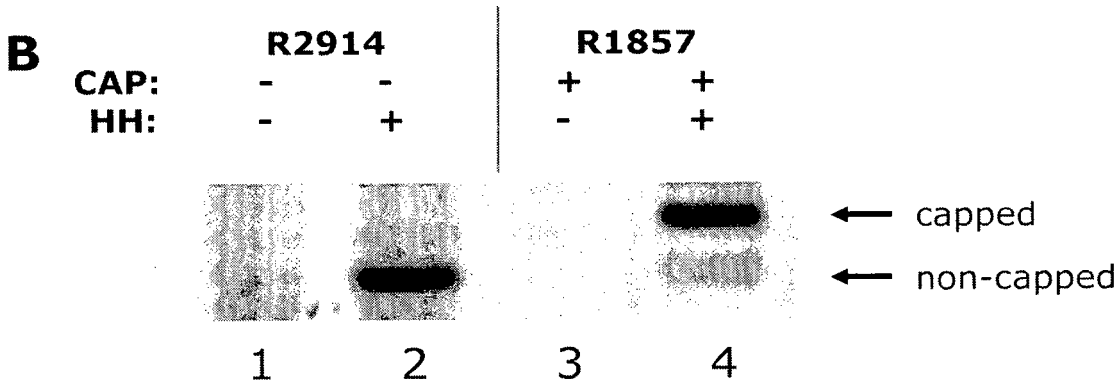

B
R2914
R1857
CAP: - - + +
HH: - + - +
capped
non-capped
1 2 3 4

Fig. 7

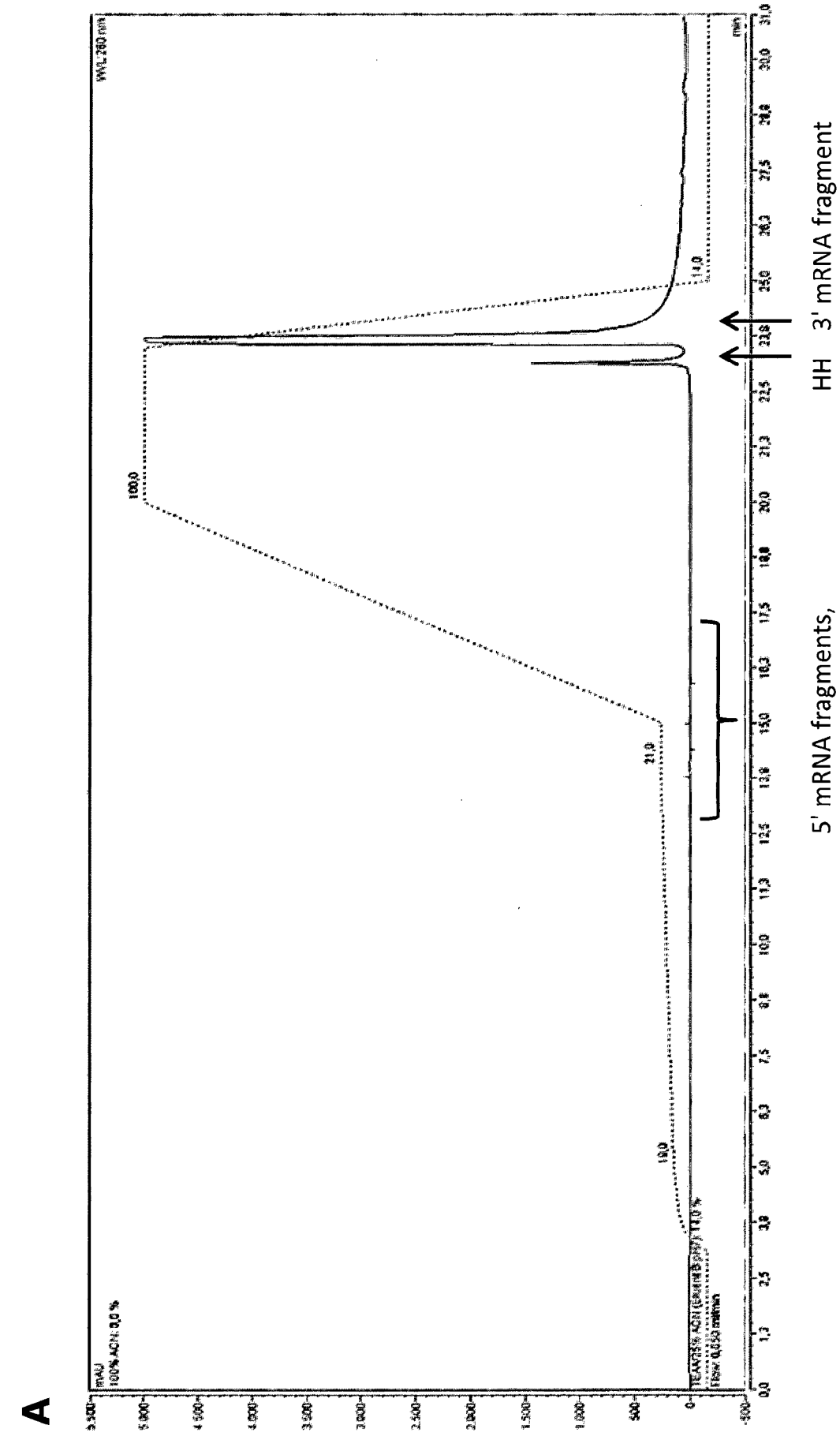

A
WL:260 nm
mAU
100% ACN: 0,0 %
100,0
21,0
19,0
14,0
5' mRNA fragments,
enlarged in (B)
HH
3' mRNA fragment

Fig. 8

B

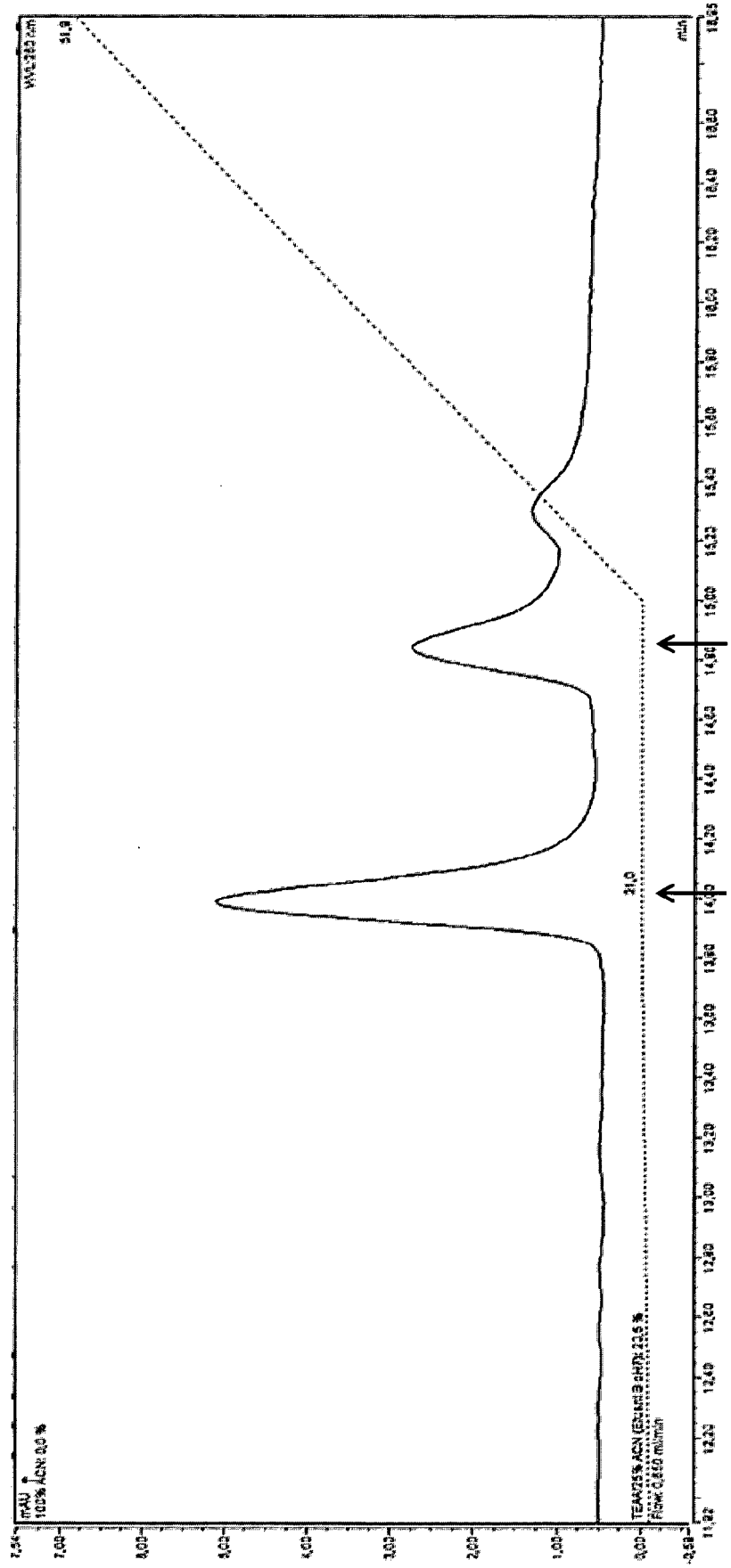


Fig. 8 – continued

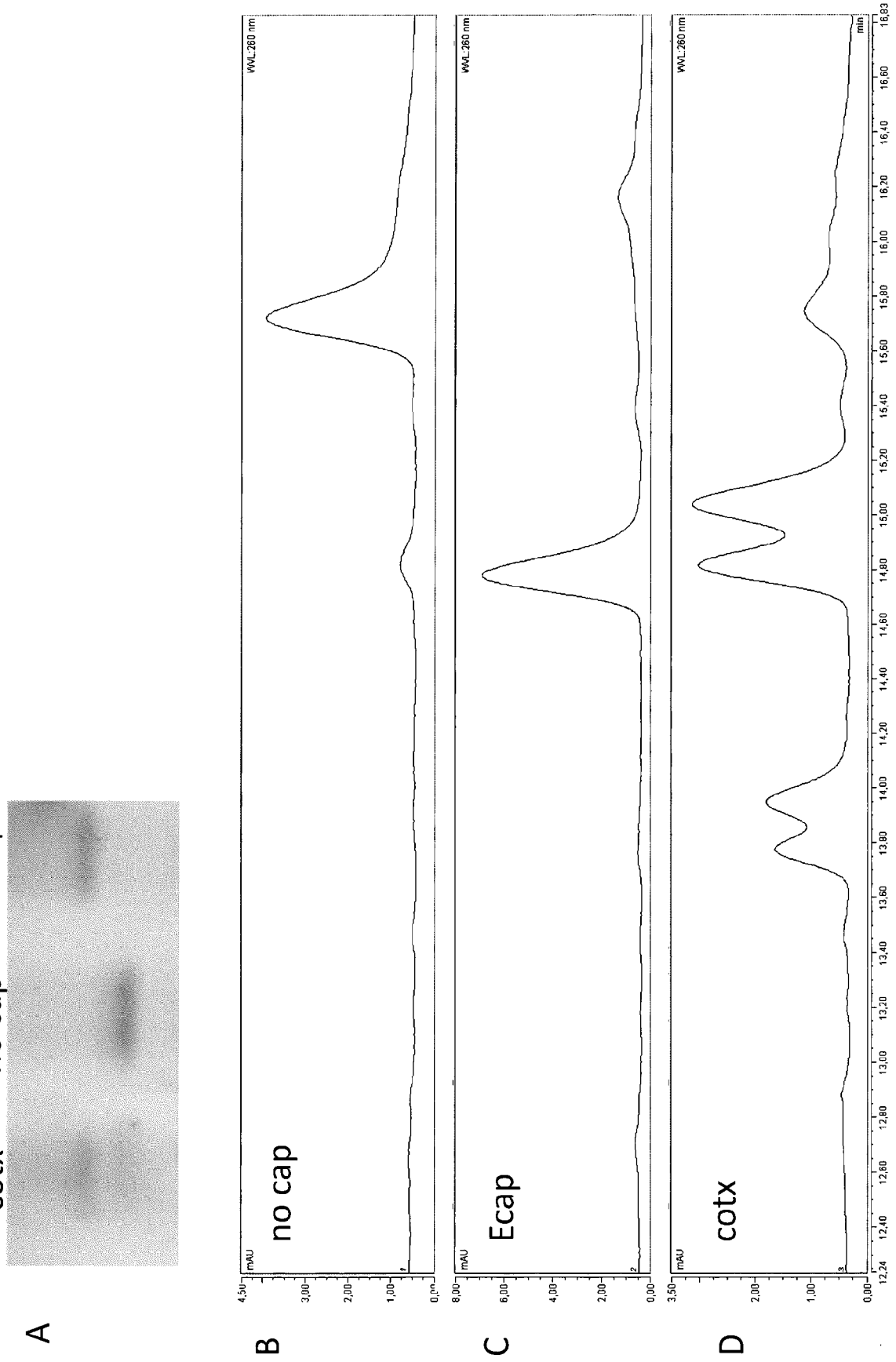


Fig. 9

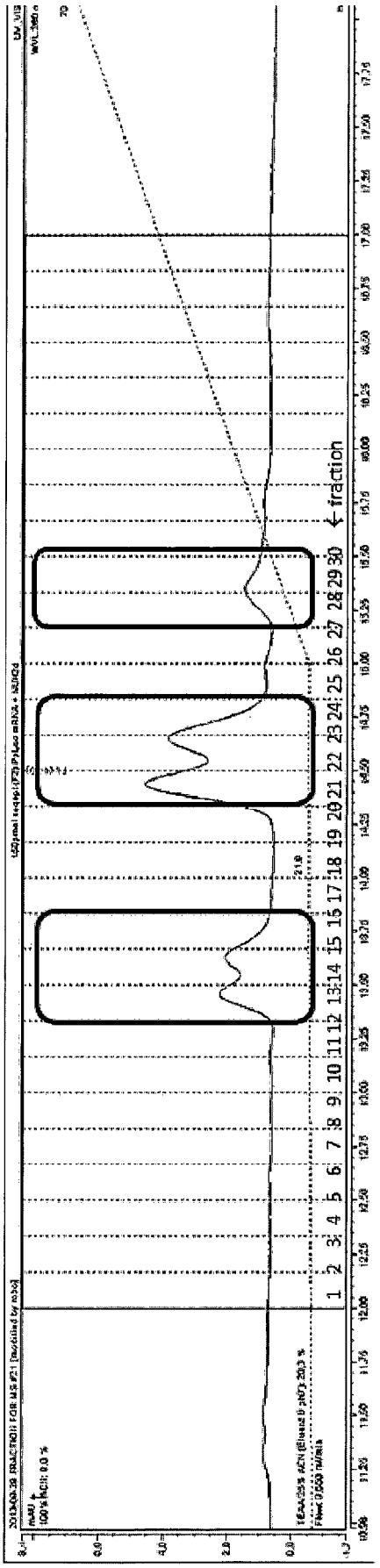
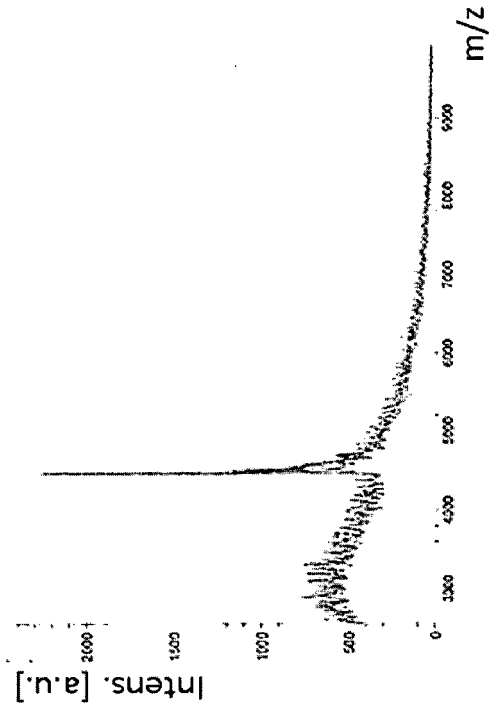

S1
S2
S3
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
← fraction

Fig. 10

A

m/z	Intens.	Res.	SN
4463.887	2113.00	613	19.1
4502.290	975.00	1668	8.8
4524.246	851.00	7361	7.8
4487.241	835.00	2651	7.6



B

m/z	Intens.	Res.	SN
4808.501	14219.50	519	140.8
4502.290	4438.50	668	44.0
4524.246	4336.50	900	43.3
4487.241	4313.50	584	42.7

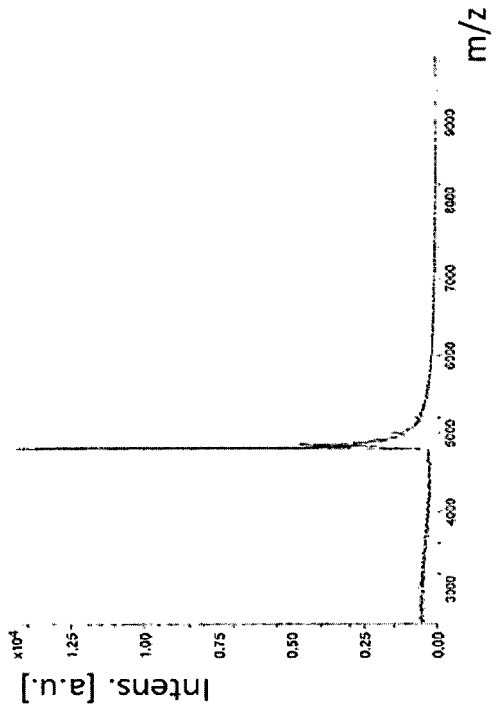


Fig. 11

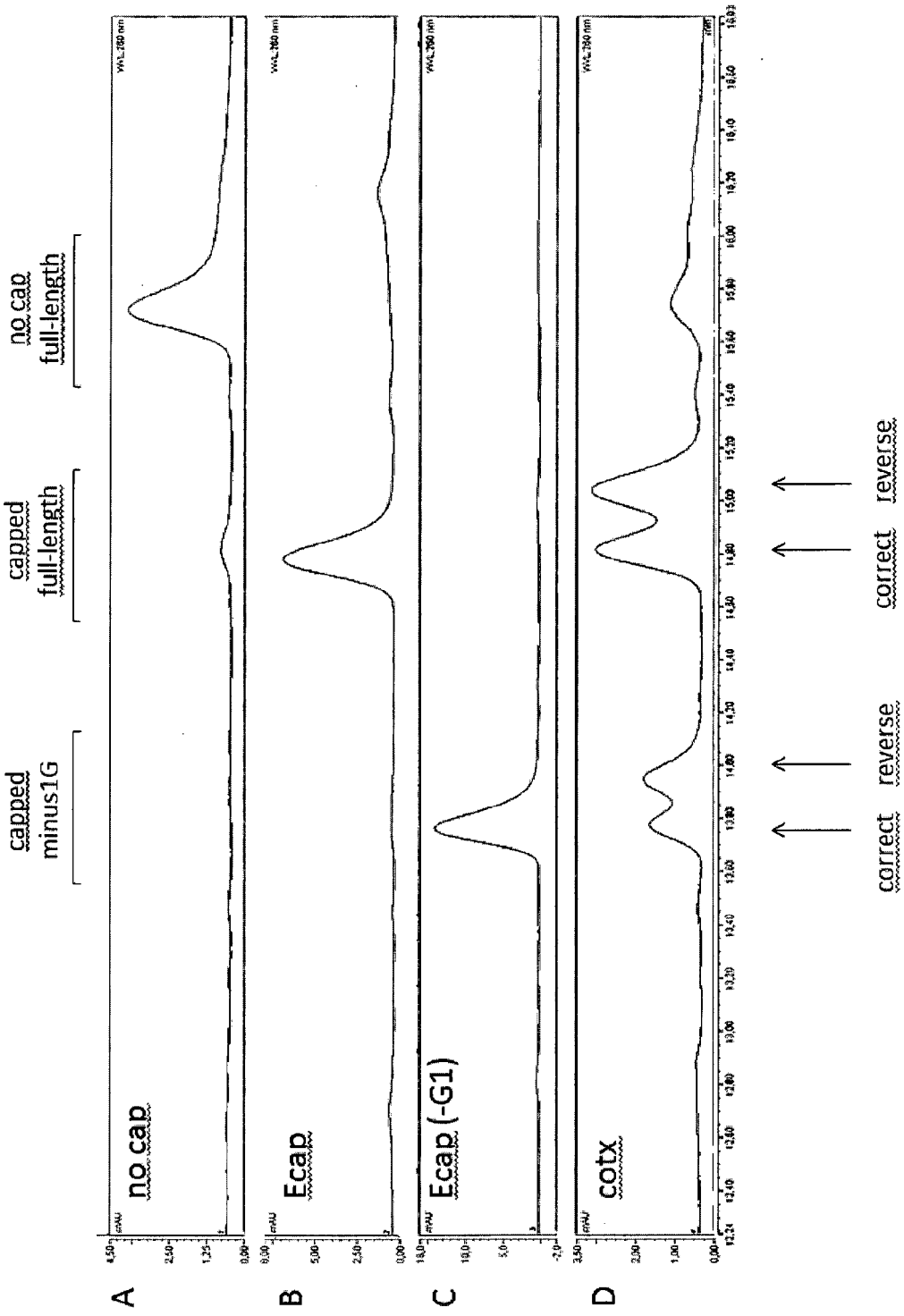

capped minus1G
capped full-length
no cap full-length
A
no cap
B
Ecap
C
Ecap (-G1)
D
cotx
correct reverse
correct reverse

Fig. 12

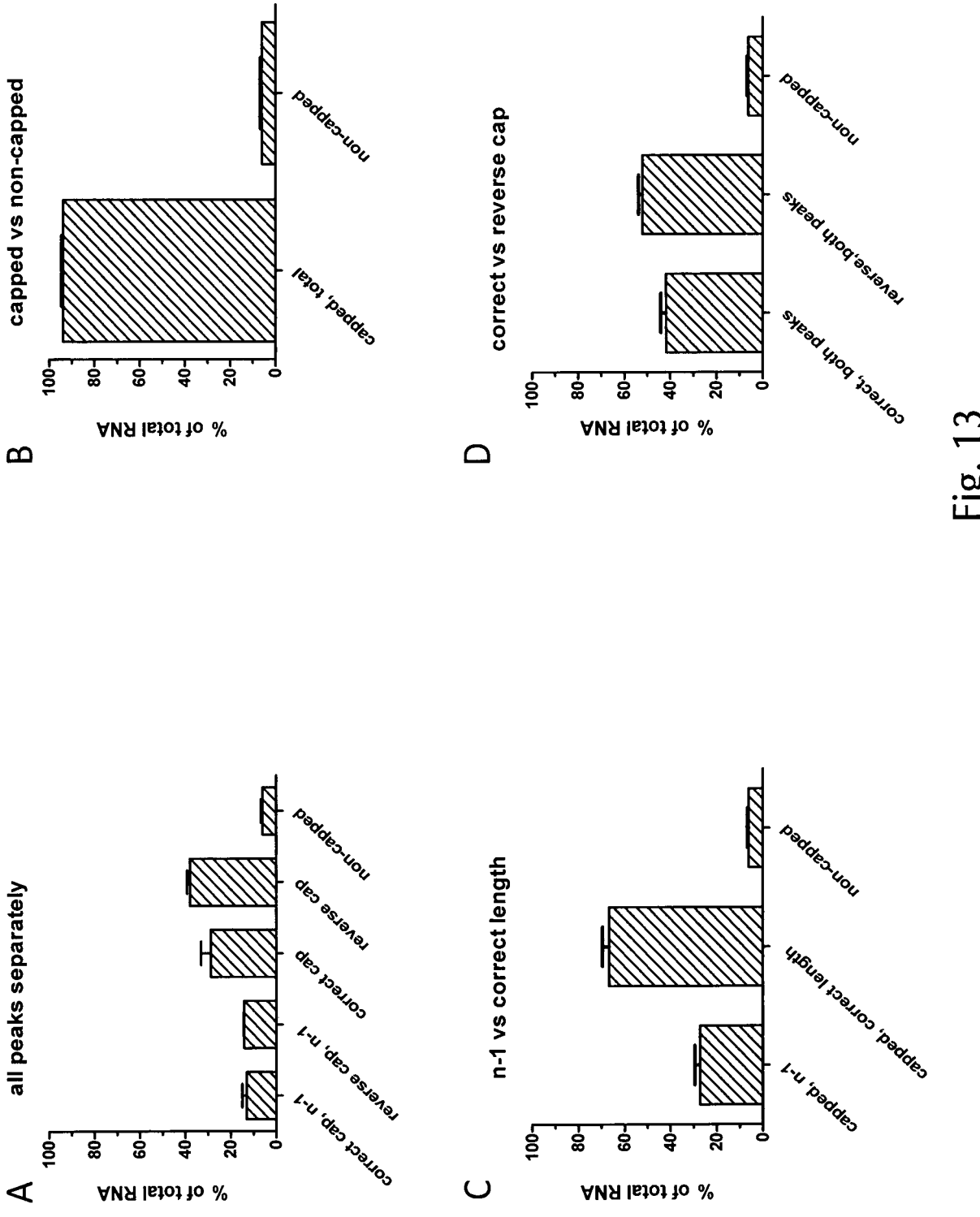

A
all peaks separately
% of total RNA
100
80
60
40
20
0
correct cap, n-1
reverse cap, n-1
correct cap
reverse cap
non-capped
B
capped vs non-capped
% of total RNA
capped, total
non-capped
C
n-1 vs correct length
% of total RNA
capped, n-1
capped, correct length
non-capped
D
correct vs reverse cap
% of total RNA
correct, both peaks
reverse,both peaks
non-capped

Fig. 13