Supporting Information II

Small Molecule Microarray-facilitated Screening of Affinity-based Probes (A*f*BPs) for γ-secretase

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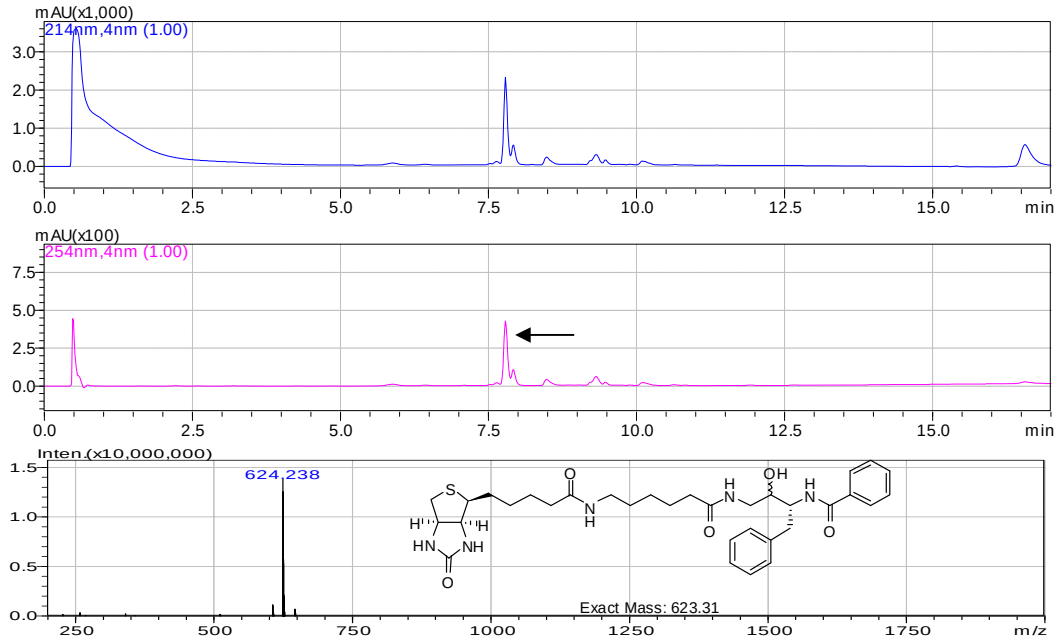
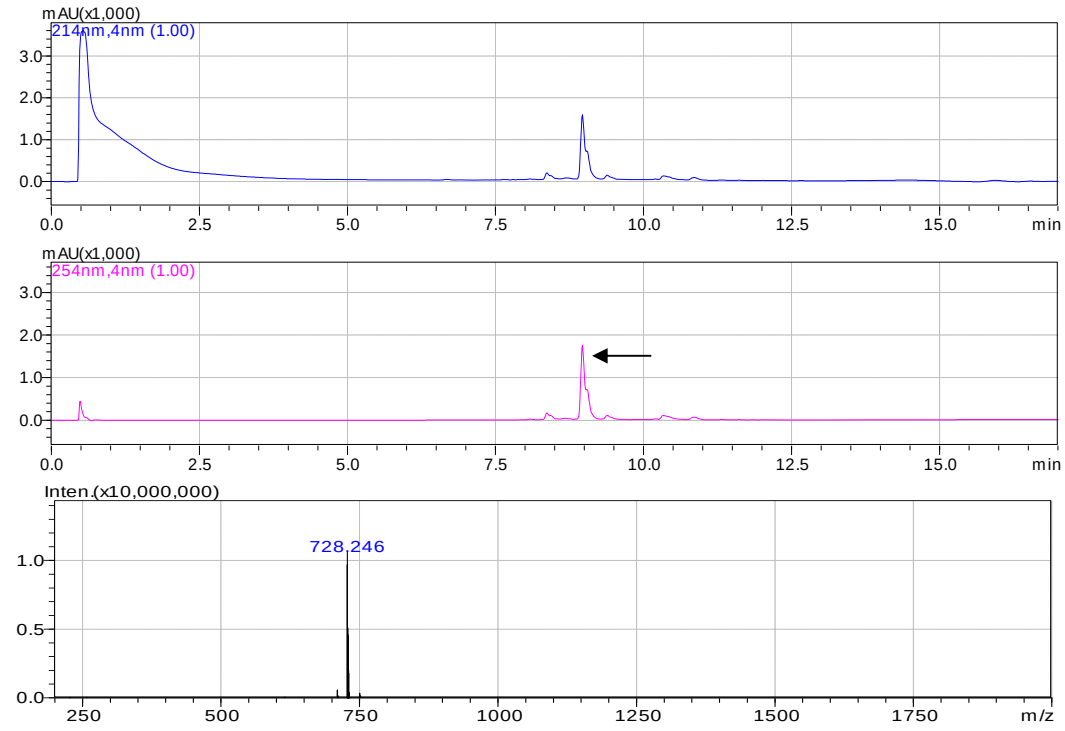
LC-MS profiles of representative samples (crude):

HPLC conditions: 0-100% B for 10 mins, then 100% B for 2 mins.
(Solvent A: 100% H_2O with 0.1 % TFA; Solvent B: 100% CH_3CN with 0.1 % TFA)

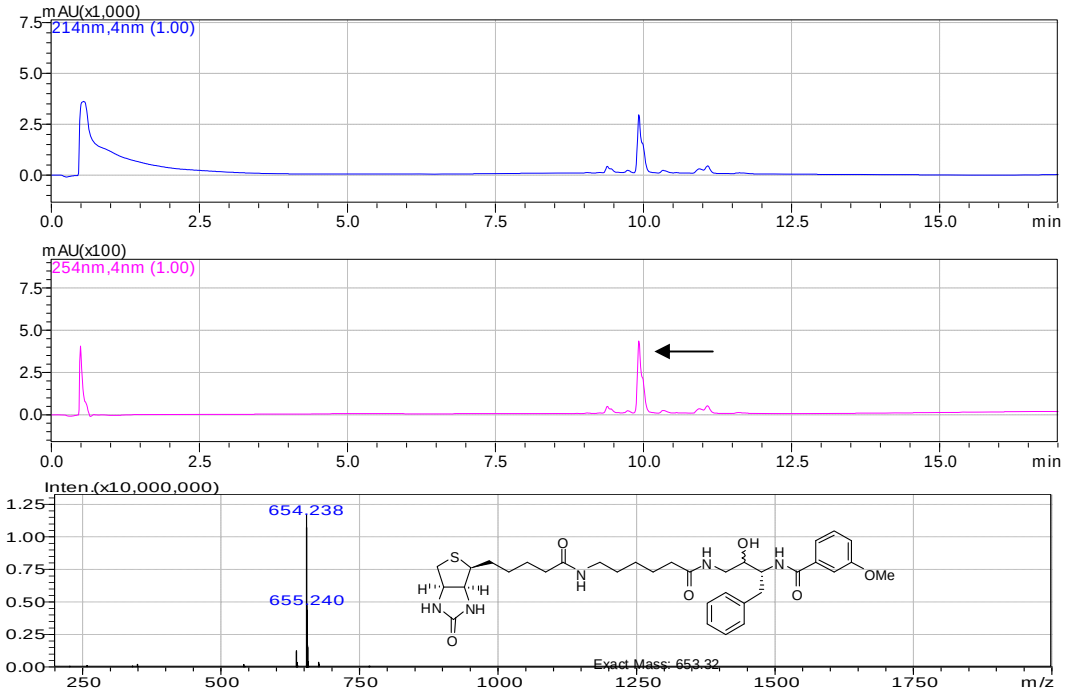
N-A1



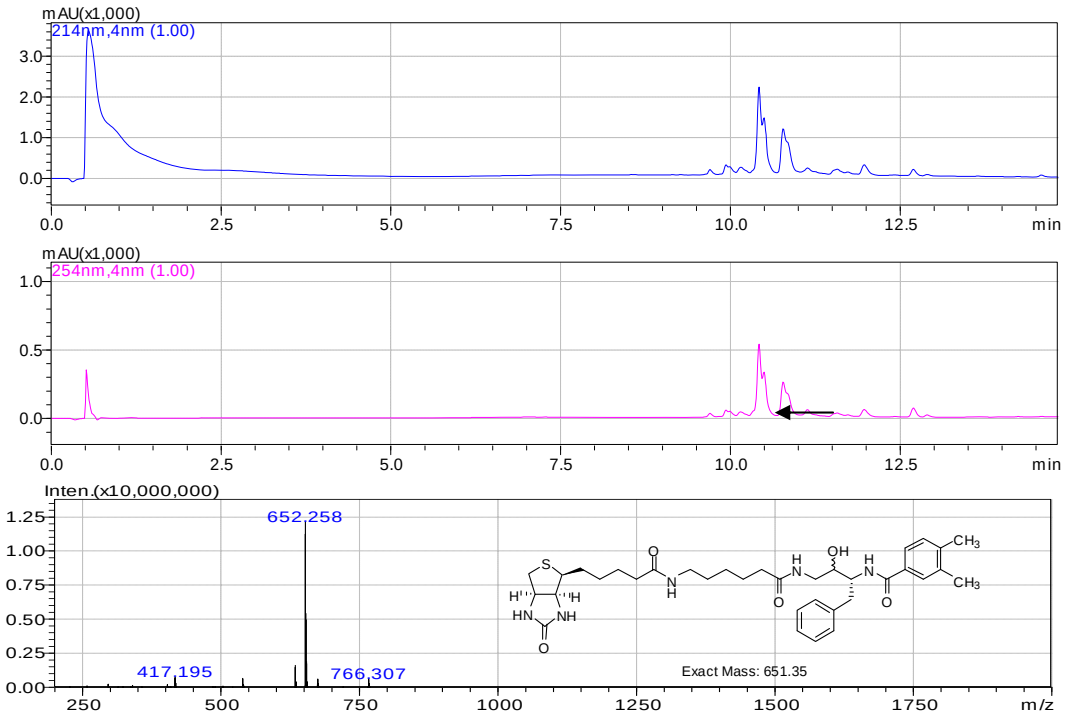
N-A2


mAU(x1,000)
214nm,4nm (1.00)
3.0
2.0
1.0
0.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
min
mAU(x1,000)
254nm,4nm (1.00)
3.0
2.0
1.0
0.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
min
Inten.(x10,000,000)
728.246
1.0
0.5
0.0
250
500
750
1000
1250
1500
1750
m/z

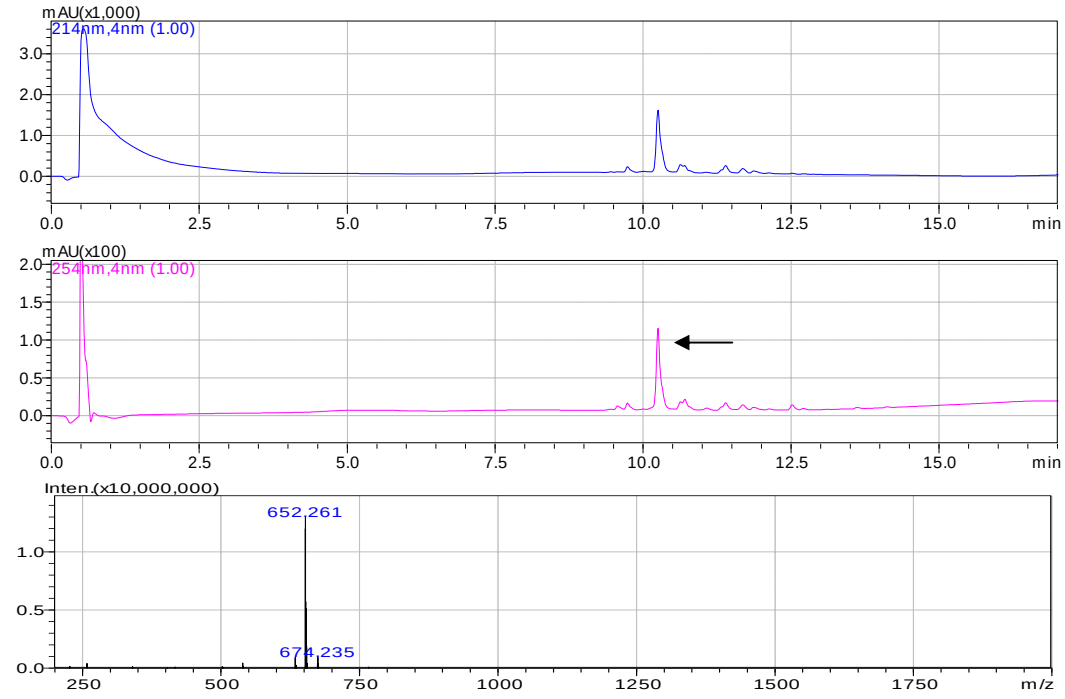
N-A8


mAU(x1,000)
214nm,4nm (1.00)
7.5
5.0
2.5
0.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
min
mAU(x100)
254nm,4nm (1.00)
7.5
5.0
2.5
0.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
min
Inten.(x10,000,000)
654.238
655.240
1.25
1.00
0.75
0.50
0.25
0.00
250
500
750
1000
1250
1500
1750
m/z
Exact Mass: 653.32

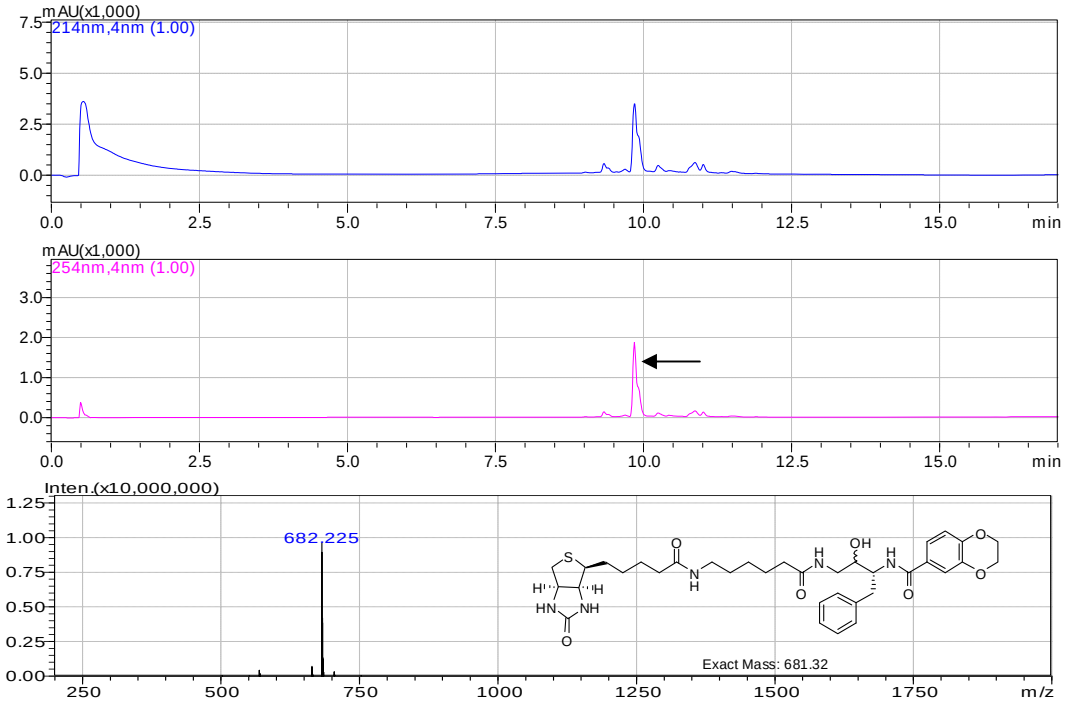
N-A9


mAU(x1,000)
214nm,4nm (1.00)
3.0
2.0
1.0
0.0
0.0
2.5
5.0
7.5
10.0
12.5
min
mAU(x1,000)
254nm,4nm (1.00)
1.0
0.5
0.0
0.0
2.5
5.0
7.5
10.0
12.5
min
Inten.(x10,000,000)
652.258
1.25
1.00
0.75
0.50
0.25
0.00
417.195
766.307
250
500
750
1000
1250
1500
1750
m/z
Exact Mass: 651.35

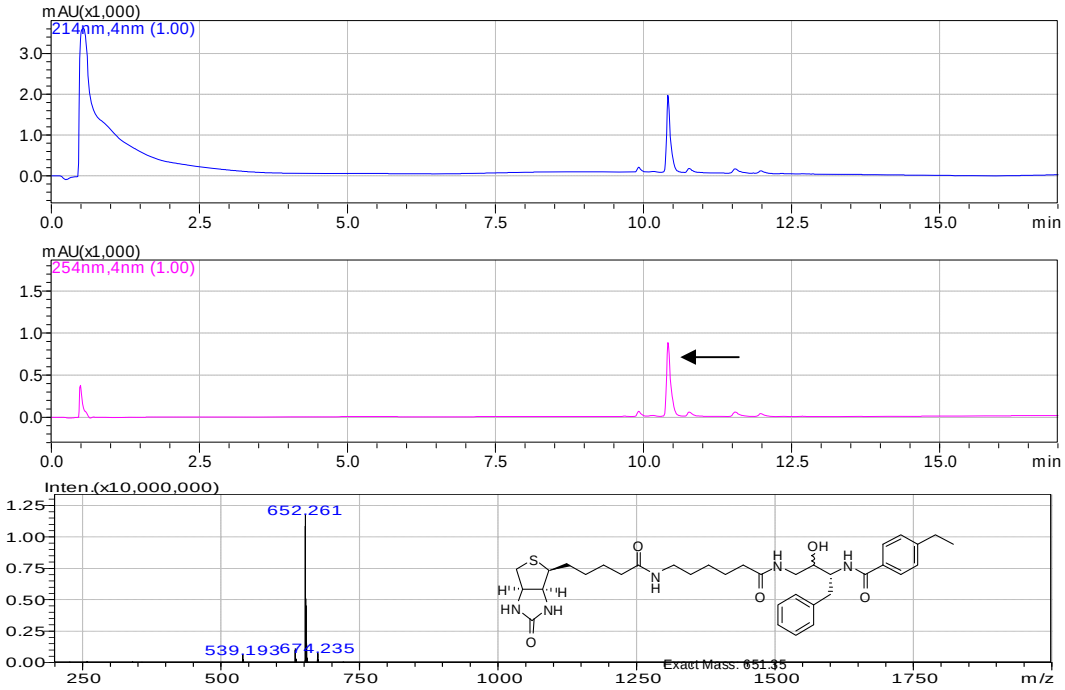
N-A10


mAU(x1,000)
214nm,4nm (1.00)
3.0
2.0
1.0
0.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
min
mAU(x100)
254nm,4nm (1.00)
2.0
1.5
1.0
0.5
0.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
min
Inten.(x10,000,000)
652.261
1.0
0.5
0.0
674.235
250
500
750
1000
1250
1500
1750
m/z

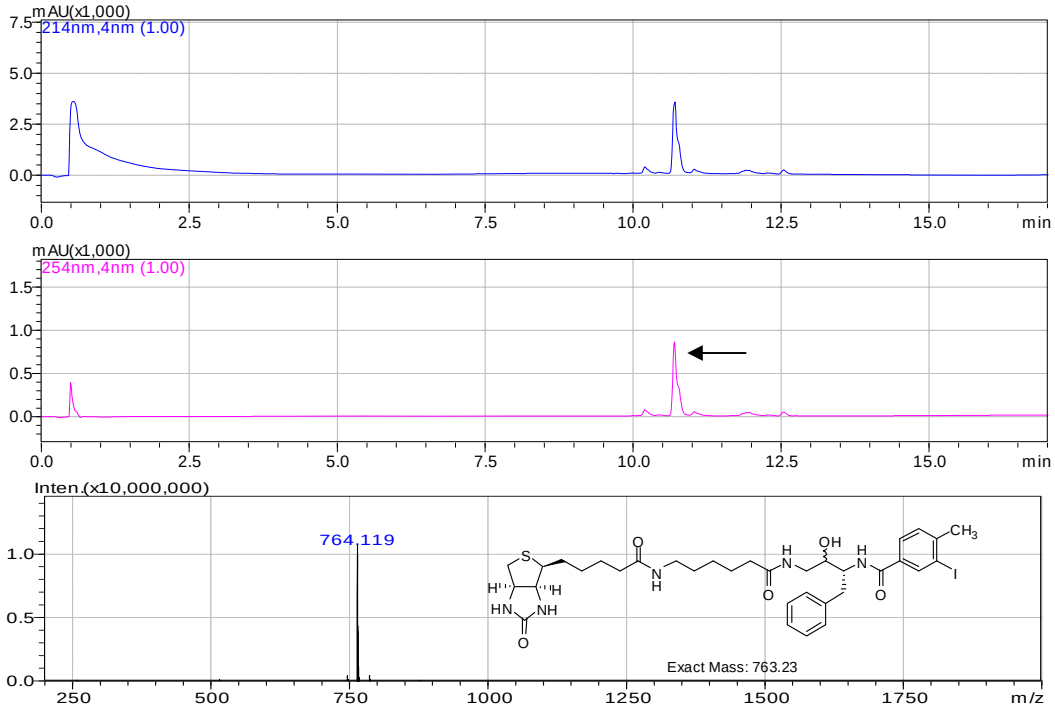
N-A14


mAU(x1,000)
214nm,4nm (1.00)
254nm,4nm (1.00)
min
Inten.(x10,000,000)
682.225
Exact Mass: 681.32
m/z

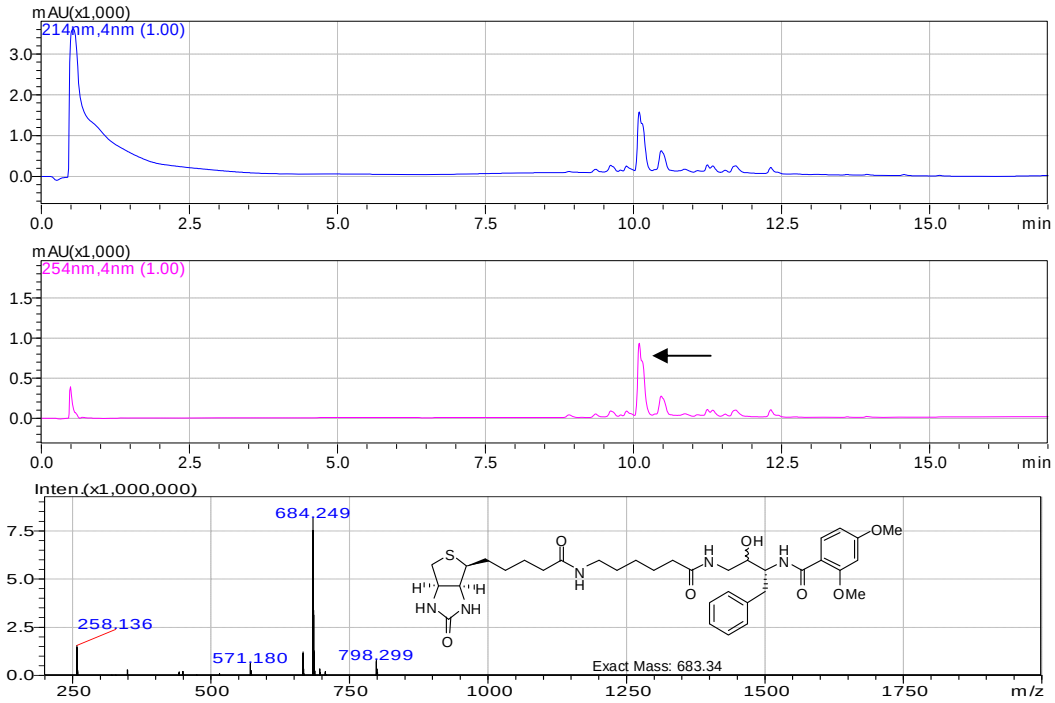
N-A15


mAU(x1,000)
214nm,4nm (1.00)
254nm,4nm (1.00)
min
Inten.(x10,000,000)
652.261
539.193674.235
Exact Mass: 651.35
m/z

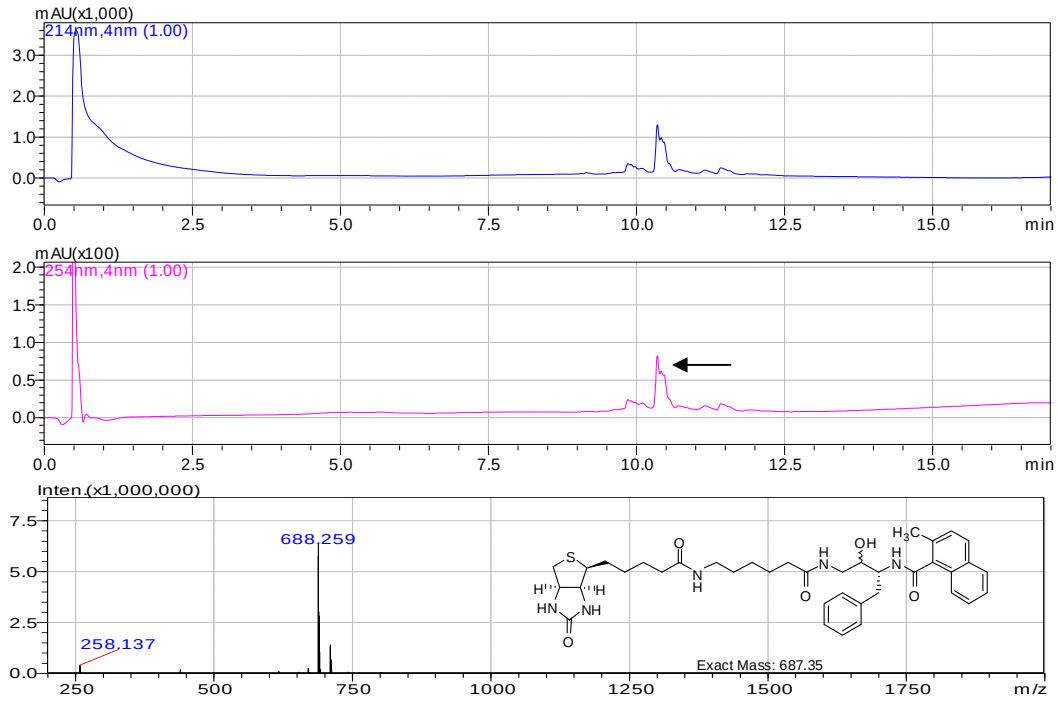
N-A21


mAU(x1,000)
214nm,4nm (1.00)
254nm,4nm (1.00)
min
Inten.(x10,000,000)
764.119
Exact Mass: 763.23
m/z

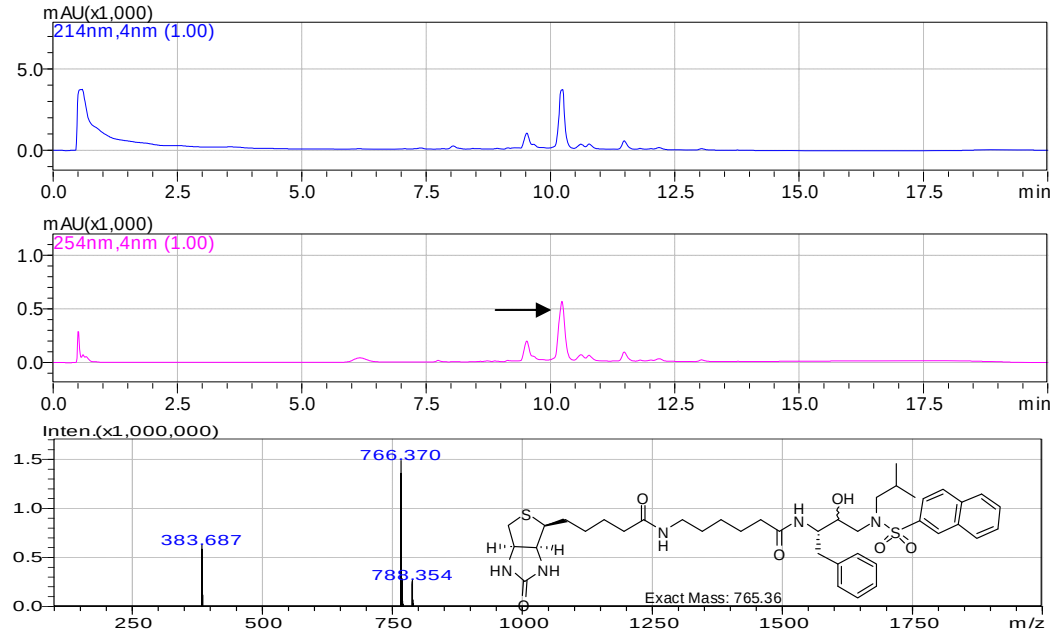
N-A23


mAU(x1,000)
214nm,4nm (1.00)
254nm,4nm (1.00)
min
Inten.(x1,000,000)
684.249
258.136
571.180
798.299
Exact Mass: 683.34
m/z

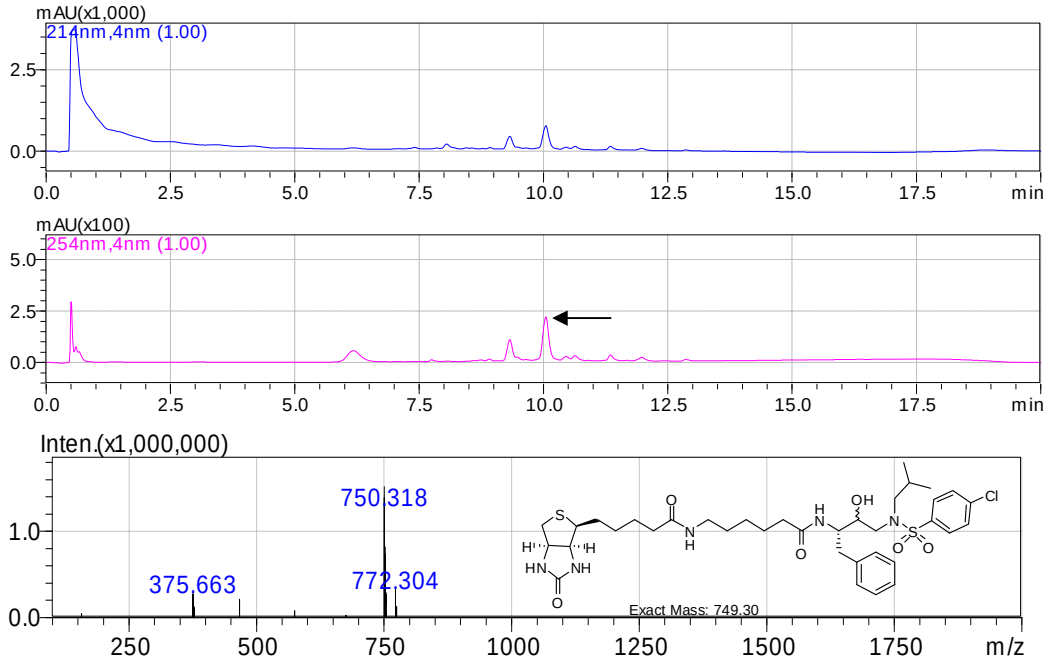
N-A29


mAU(x1,000)
214nm,4nm (1.00)
mAU(x100)
254nm,4nm (1.00)
Inten.(x1,000,000)
688.259
258.137
Exact Mass: 687.35
m/z

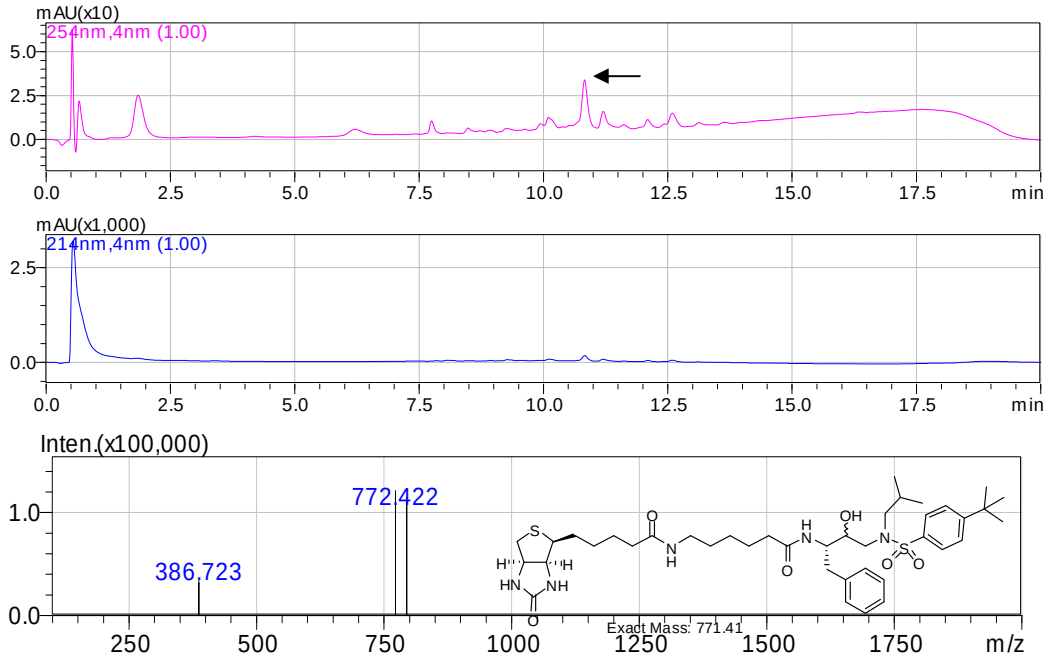
C-A2


mAU(x1,000)
214nm,4nm (1.00)
mAU(x1,000)
254nm,4nm (1.00)
Inten.(x1,000,000)
766.370
383.687
788.354
Exact Mass: 765.36
m/z

C-A3

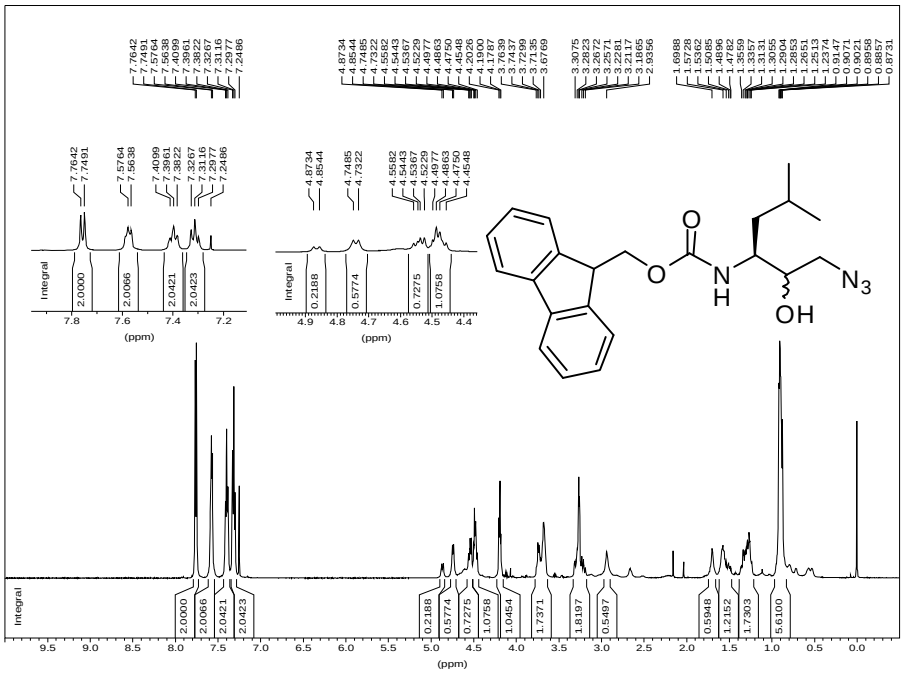

mAU(x1,000)
214nm,4nm (1.00)
mAU(x100)
254nm,4nm (1.00)
min
Inten.(x1,000,000)
750.318
375.663
772.304
Exact Mass: 749.30
m/z

C-A10


mAU(x10)
254nm,4nm (1.00)
mAU(x1,000)
214nm,4nm (1.00)
min
Inten.(x100,000)
772.422
386.723
Exact Mass: 771.41
m/z

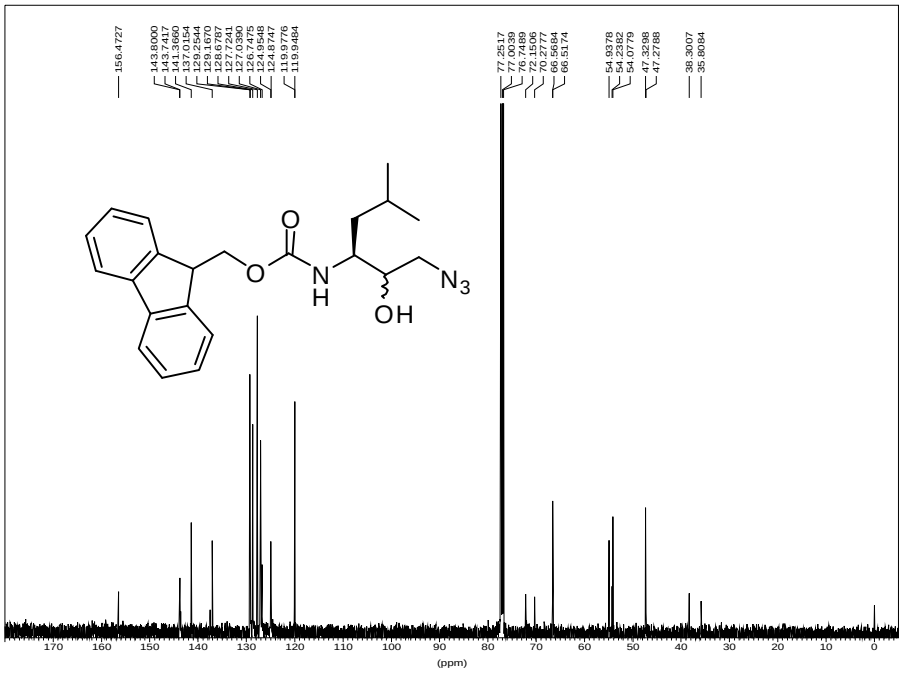
NMR Characterization of selected key intermediates/final products.

1H AMX500fmoc-leu-war-n3



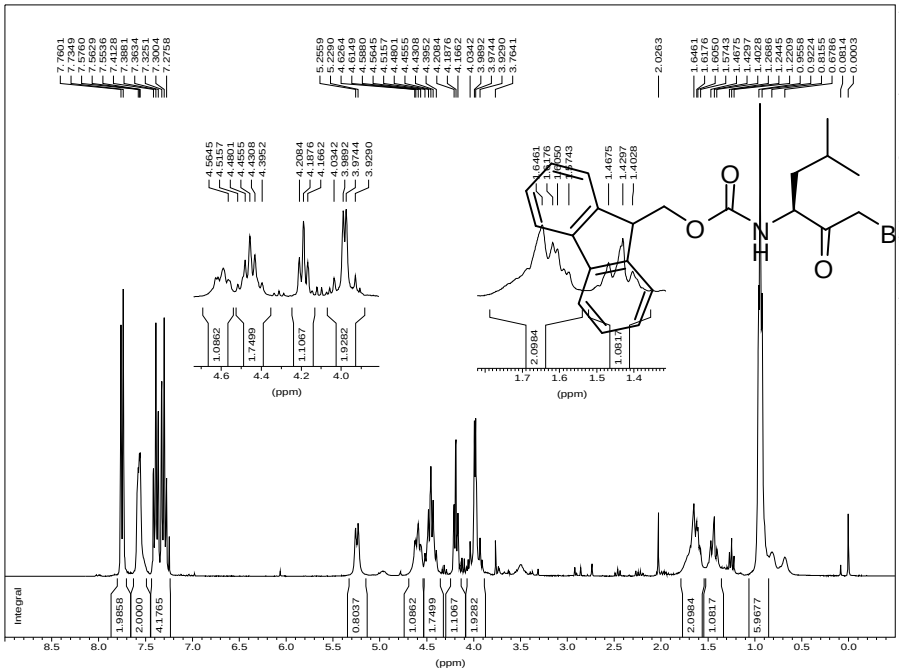
*** Current Data Parameters ***
NAME : shb0616
EXPNO : 3
PROCNO : 1
*** Acquisition Parameters ***
NS : 8
O1 : 3088.51 Hz
O2 : 3088.51 Hz
O3 : 3088.51 Hz
SFO1 : 500.1330885 MHz
SFO2 : 500.1330885 MHz
SFO3 : 500.1330885 MHz
*** 1D NMR Plot Parameters ***
SR : 18.15 Hz

13C AMX500fmoc-phe-war-n3

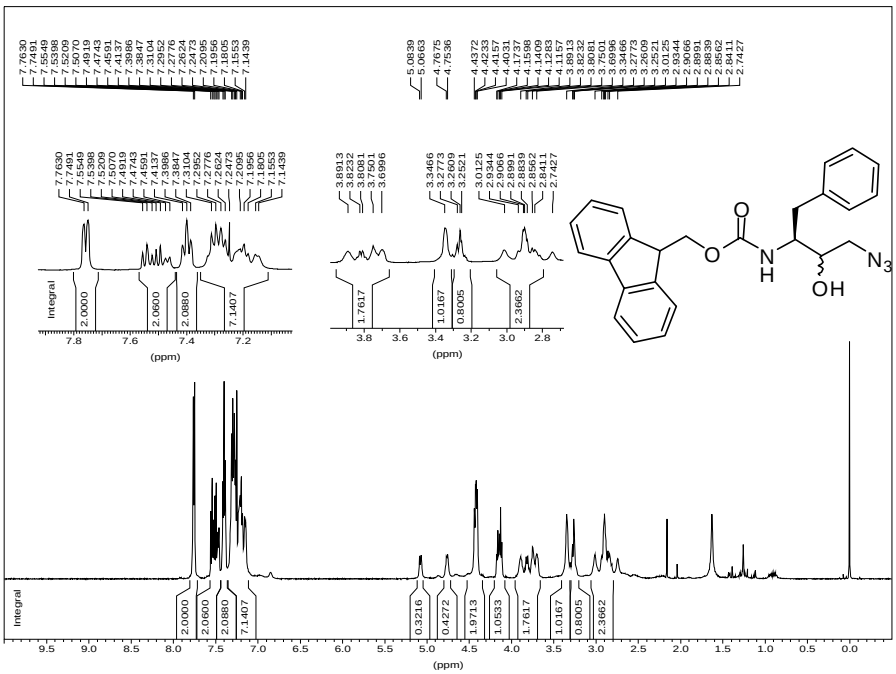


*** Current Data Parameters ***
NAME : shb0616
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
NS : 310
O1 : 13204.57 Hz
O2 : 2000.52 Hz
O3 : 12575.30 Hz
SFO1 : 125.7709936 MHz
SFO2 : 500.1320005 MHz
SFO3 : 125.7703643 MHz
*** 1D NMR Plot Parameters ***
SR : 5.24 Hz

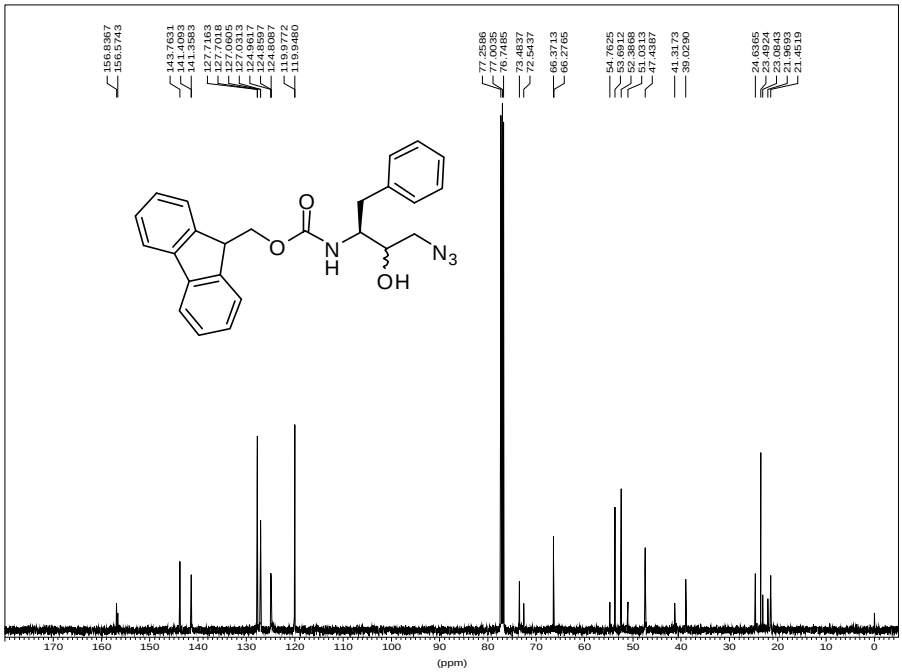
1H normal range AC300fmocleu-br



1H AMX500fmoc-phe-war-n3



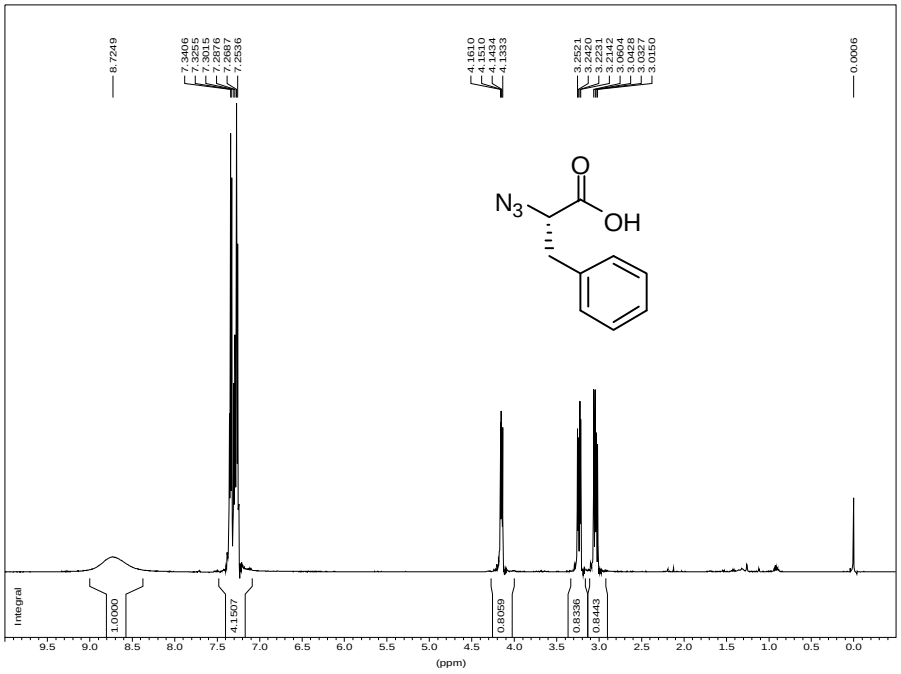
13C AMX500fmoc-leu-war-n3



*** Current Data Parameters ***

NAME	:	shb0616
EXPNO	:	4
PROCNO	:	1
*** Acquisition Parameters ***		
NS	:	315
O1	:	13204.57 Hz
O2	:	2000.52 Hz
O3	:	12575.30 Hz
SFO1	:	125.7709936 MHz
SFO2	:	500.1320005 MHz
SFO3	:	125.7703643 MHz
*** 1D NMR Plot Parameters ***		
SR	:	6.21 Hz

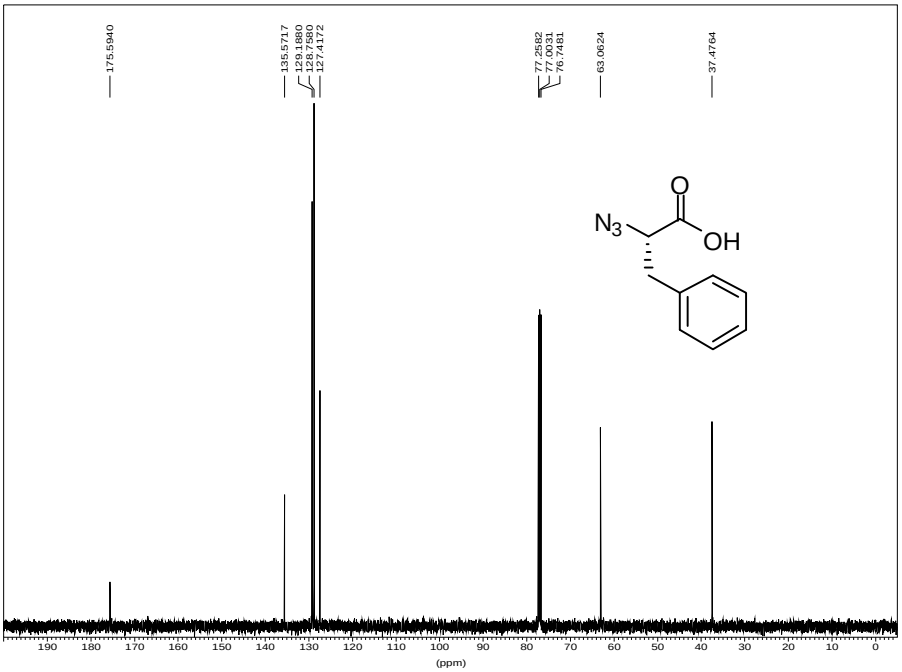
1H AMX500N3-phe-war-Br



*** Current Data Parameters ***

NAME	:	shb0616
EXPNO	:	13
PROCNO	:	1
*** Acquisition Parameters ***		
NS	:	8
O1	:	3088.51 Hz
O2	:	3088.51 Hz
O3	:	3088.51 Hz
SFO1	:	500.1330885 MHz
SFO2	:	500.1330885 MHz
SFO3	:	500.1330885 MHz
*** 1D NMR Plot Parameters ***		
SR	:	21.93 Hz

13C AMX500n3-phe-war-Br

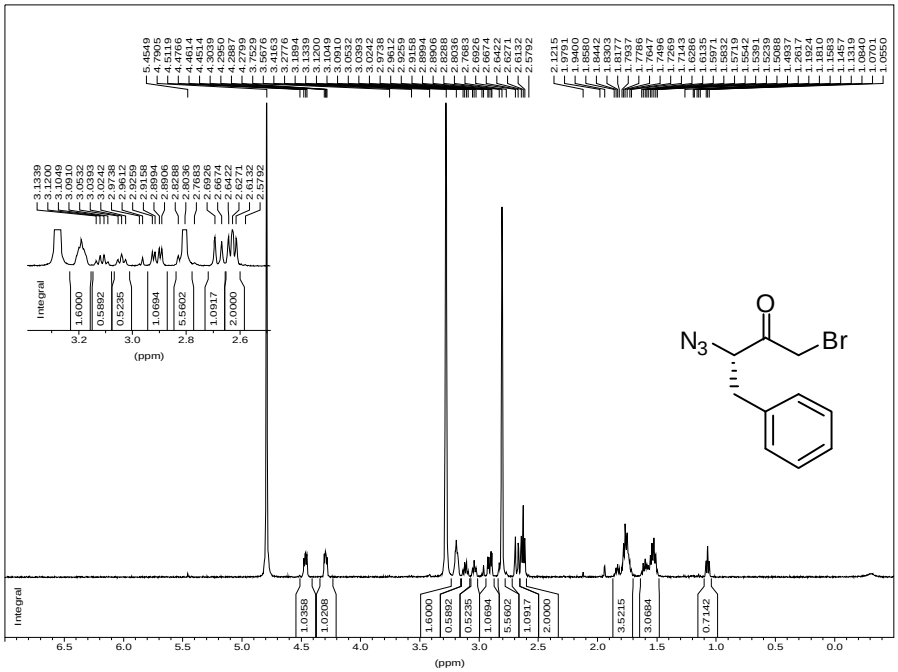


*** Current Data Parameters ***

NAME	:	shb0616
EXPNO	:	14
PROCNO	:	1
*** Acquisition Parameters ***		
NS	:	34
O1	:	13204.57 Hz
O2	:	2000.52 Hz
O3	:	12575.30 Hz
SFO1	:	125.7709936 MHz
SFO2	:	500.1320005 MHz
SFO3	:	125.7703643 MHz
*** 1D NMR Plot Parameters ***		
SR	:	6.26 Hz

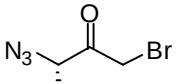
1H AMX500

biotin-NHS

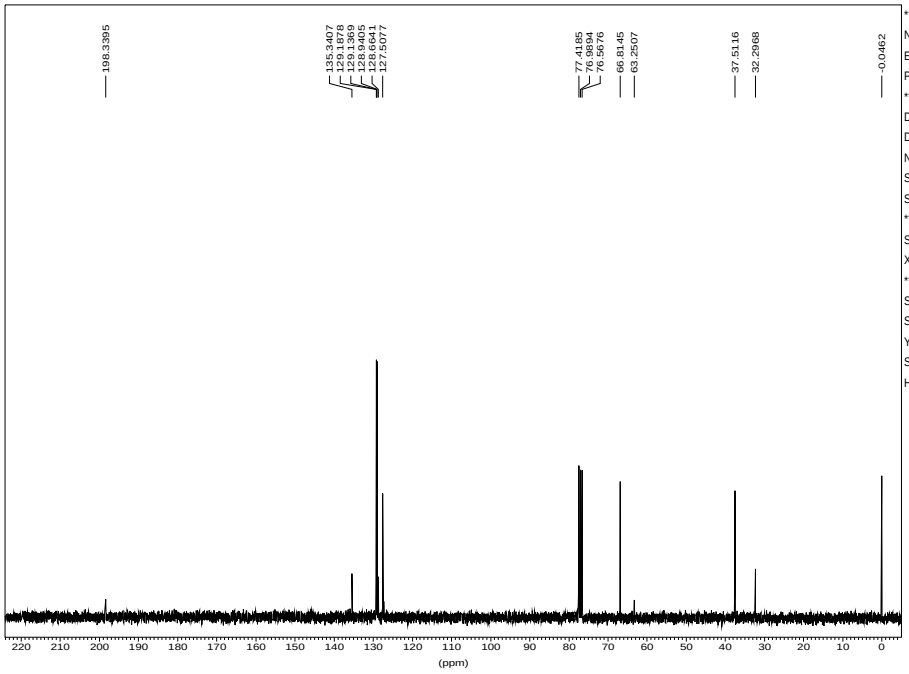


*** Current Data Parameters ***

NAME	:	ag14shb
EXPNO	:	1
PROCNO	:	1
*** Acquisition Parameters ***		
DATE_t	:	06:24:50
DATE_d	:	Aug 14 2008
DBPNAM7	:	
DS	:	0
NS	:	8
O1	:	3088.51 Hz
O2	:	3088.51 Hz
O3	:	3088.51 Hz
SFO1	:	500.1330885 MHz
SFO2	:	500.1330885 MHz
SFO3	:	500.1330885 MHz
SOLVENT	:	MeOD
*** Processing Parameters ***		
AZFW	:	0.100 ppm
*** 1D NMR Plot Parameters ***		
SR	:	27.43 Hz

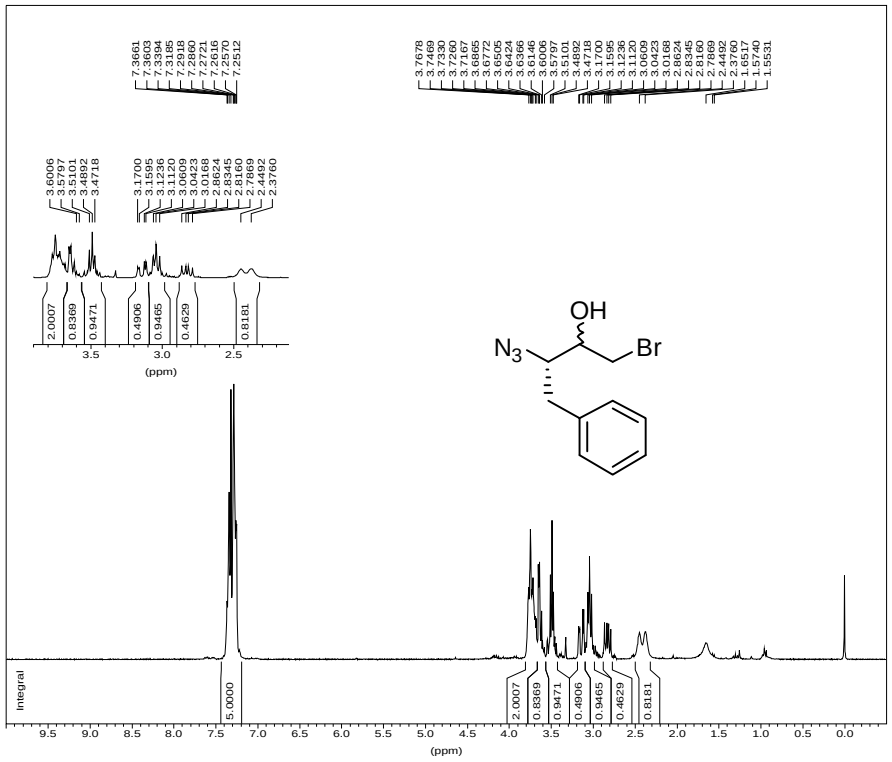


13C Standard AC300



*** Current Data Parameters ***
NAME : ag20shb
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 03:59:43
DATE_d : Aug 20 2008
NS : 210
SFO1 : 75.4756731 MHz
SOLVENT : CDCl3
*** Processing Parameters ***
SF : 75.4677536 MHz
XDIM : 64
*** 1D NMR Plot Parameters ***
Start : 224.10 ppm
Stop : -5.00 ppm
YScale : 200.00 %
SR : 4.56 Hz
Hz_cm : 831.23

N3-phe-warhead-Br



*** Current Data Parameters ***

NAME	:	ju20shb
EXPNO	:	3
PROCNO	:	1

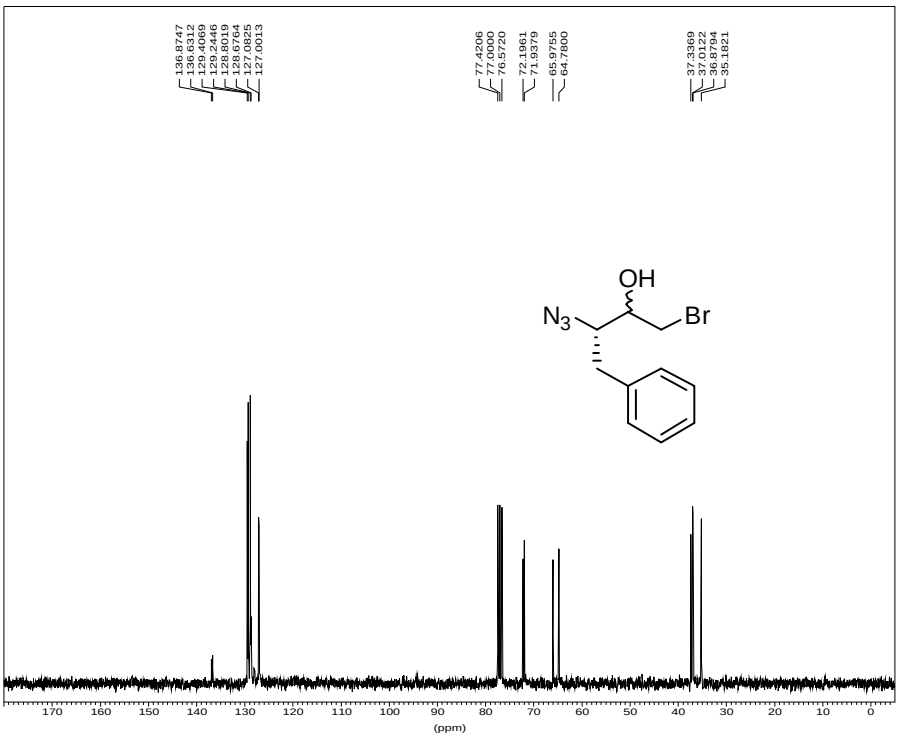
*** Acquisition Parameters ***

DATE_t	:	22:47:46
DATE_d	:	Jun 19 2007
NS	:	8
SFO1	:	300.1315000 MHz
SOLVENT	:	CDCl3

*** 1D NMR Plot Parameters ***

Start	:	10.00 ppm
Stop	:	-0.50 ppm

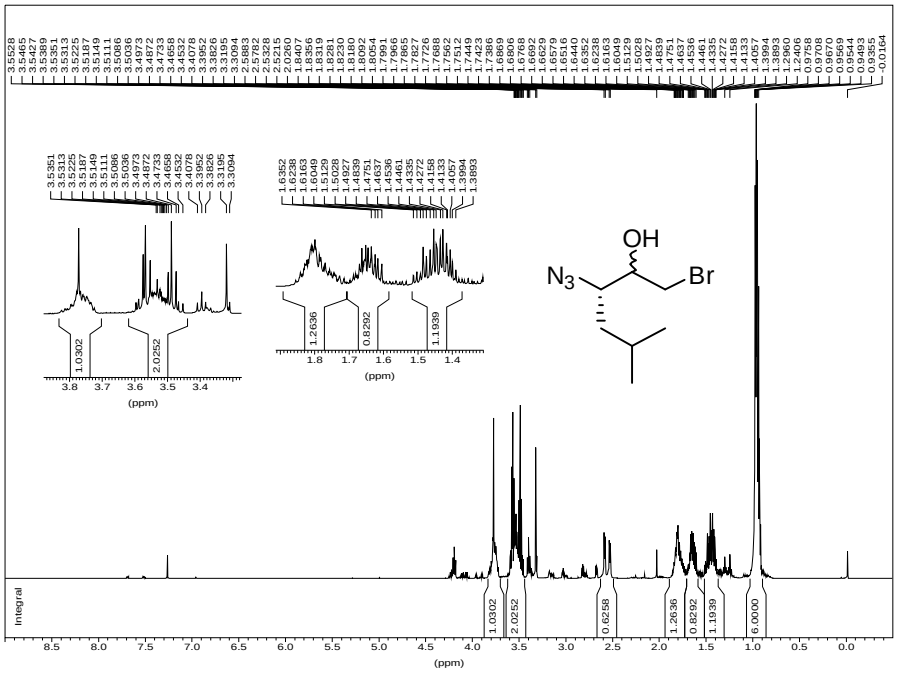
N3-phe-warhead-Br



*** Current Data Parameters ***

NAME	:	ju20shb
EXPNO	:	4
PROCNO	:	1
*** Acquisition Parameters ***		
DATE_t	:	22:49:00
DATE_d	:	Jun 19 2007
NS	:	207
SFO1	:	75.4760840 MHz
SOLVENT	:	CDCl3
*** 1D NMR Plot Parameters ***		
Start	:	180.01 ppm
Stop	:	-5.00 ppm

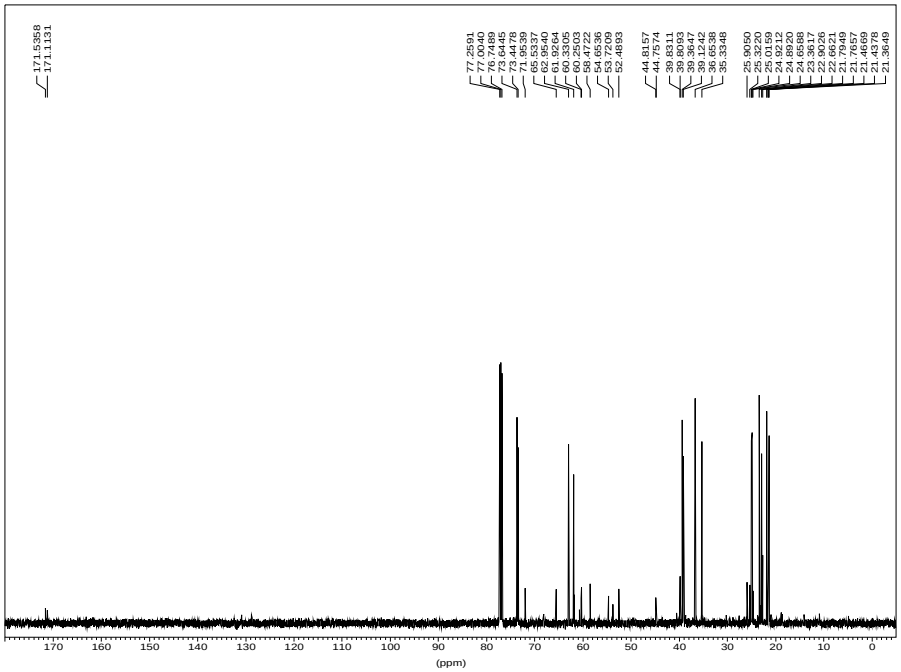
1H AMX500n3-leu-war-Br



*** Current Data Parameters ***

NAME	:	shb0616
EXPNO	:	17
PROCNO	:	1
*** Acquisition Parameters ***		
NS	:	8
O1	:	3088.51 Hz
O2	:	3088.51 Hz
O3	:	3088.51 Hz
SFO1	:	500.1330885 MHz
SFO2	:	500.1330885 MHz
SFO3	:	500.1330885 MHz
*** 1D NMR Plot Parameters ***		
SR	:	12.15 Hz

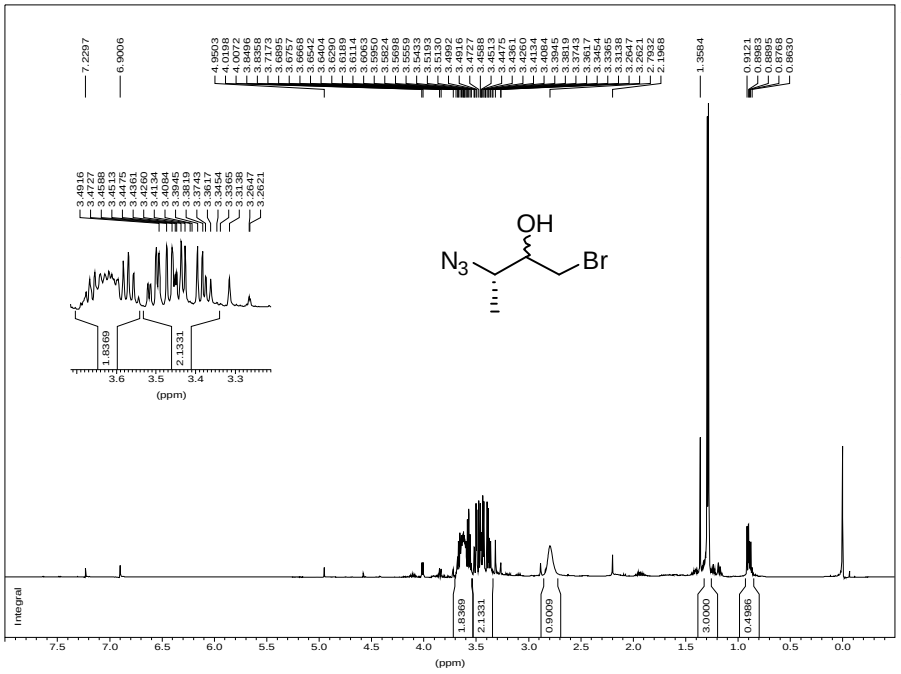
13C AMX500n3-leu-war-Br



*** Current Data Parameters ***

NAME	:	shb0616
EXPNO	:	18
PROCNO	:	1
*** Acquisition Parameters ***		
NS	:	88
O1	:	13204.57 Hz
O2	:	2000.52 Hz
O3	:	12575.30 Hz
SFO1	:	125.7709936 MHz
SFO2	:	500.1320005 MHz
SFO3	:	125.7703643 MHz
*** 1D NMR Plot Parameters ***		
SR	:	7.98 Hz

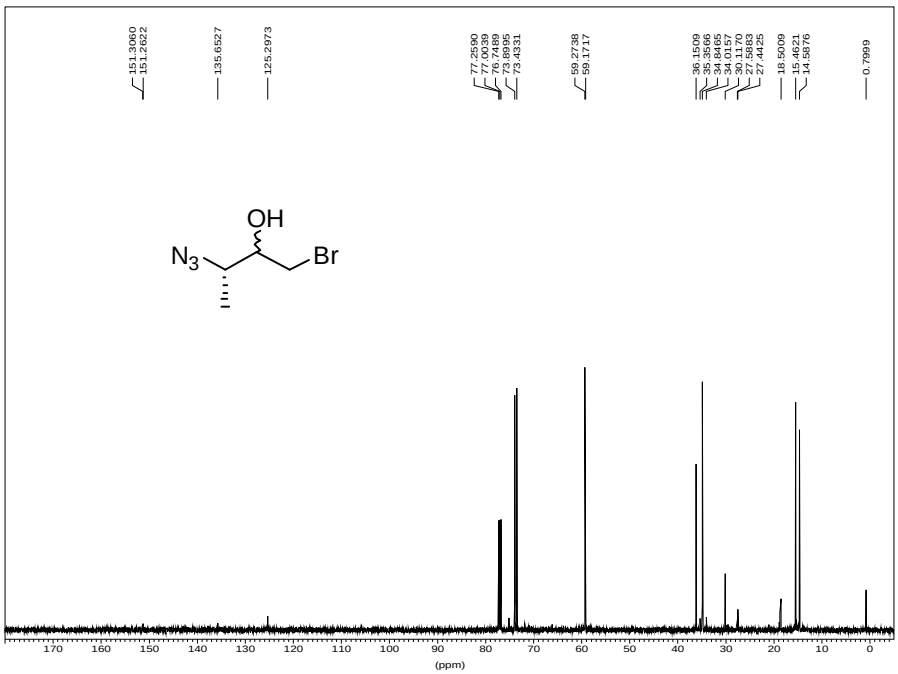
1H AMX500n3-ala-war-Br



*** Current Data Parameters ***

NAME	:	shb0616
EXPNO	:	15
PROCNO	:	1
*** Acquisition Parameters ***		
NS	:	8
O1	:	3088.51 Hz
O2	:	3088.51 Hz
O3	:	3088.51 Hz
SFO1	:	500.1330885 MHz
SFO2	:	500.1330885 MHz
SFO3	:	500.1330885 MHz
*** 1D NMR Plot Parameters ***		
SR	:	27.60 Hz

13C AMX500n3-ala-war-Br



*** Current Data Parameters ***

NAME	:	shb0616
EXPNO	:	16
PROCNO	:	1

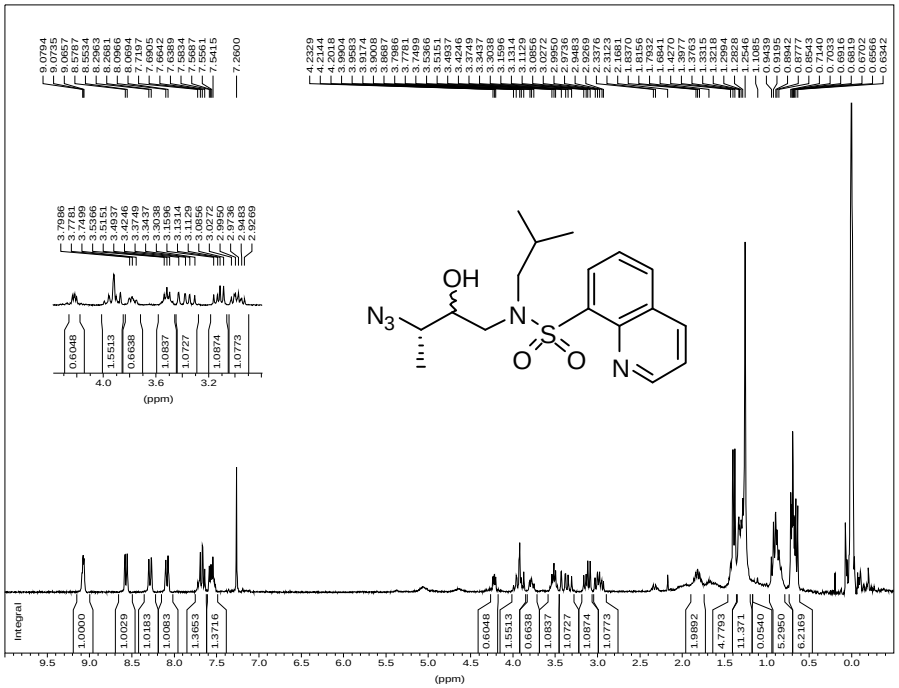
*** Acquisition Parameters ***

NS	:	38
O1	:	13204.57 Hz
O2	:	2000.52 Hz
O3	:	12575.30 Hz
SFO1	:	125.7709936 MHz
SFO2	:	500.1320005 MHz
SFO3	:	125.7703643 MHz

*** 1D NMR Plot Parameters ***

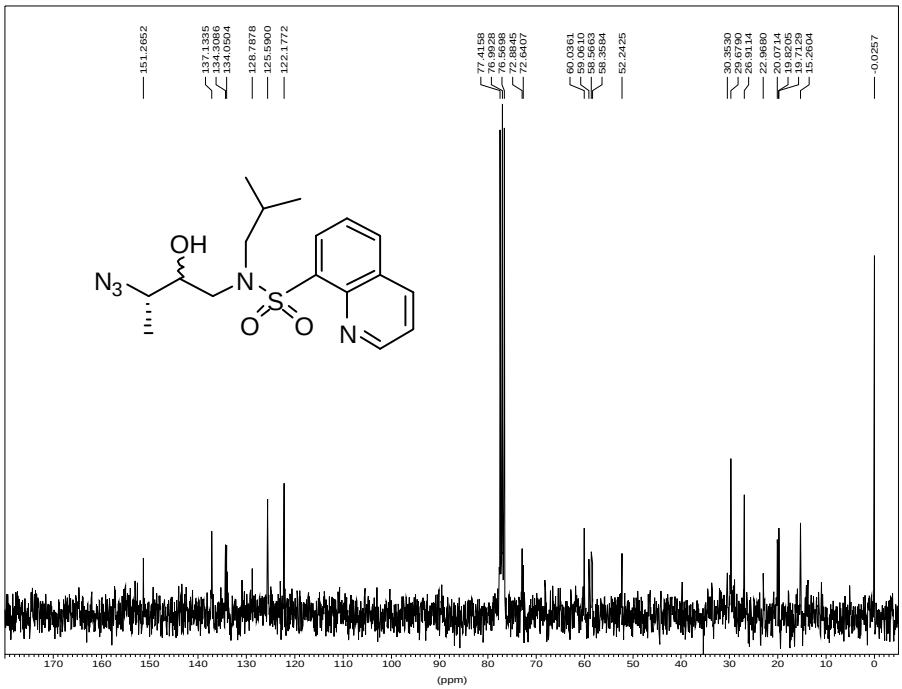
SR	:	21.74 Hz

C-Ala-1wh



*** Current Data Parameters ***
NAME : 1803shb
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:51:11
DATE_d : Mar 17 2009
NS : 8
SFO1 : 300.1312500 MHz
SOLVENT : CDCl3
*** Processing Parameters ***
SF : 300.1298200 MHz
XDIM : 8192
*** 1D NMR Plot Parameters ***
Start : 10.00 ppm
Stop : -0.50 ppm
YScale : 12.50 %
SR : -180.04 Hz
Hz_cm : 151.51

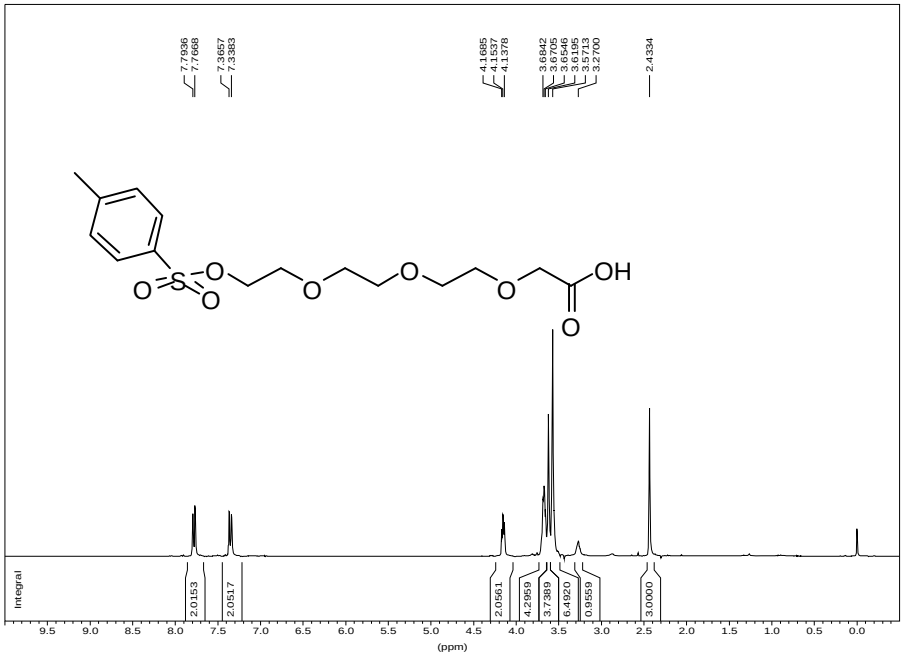
C-Ala-1wh



*** Current Data Parameters ***
NAME : 1803shb
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:53:02
DATE_d : Mar 17 2009
NS : 74
SFO1 : 75.4745111 MHz
SOLVENT : CDCl3
*** Processing Parameters ***
SF : 75.4677034 MHz
XDIM : 64
*** 1D NMR Plot Parameters ***
Start : 180.00 ppm
Stop : -4.99 ppm
YScale : 200.00 %
SR : -15.61 Hz
Hz_cm : 671.21

1H normal range AC300

TsO-PEG-OH

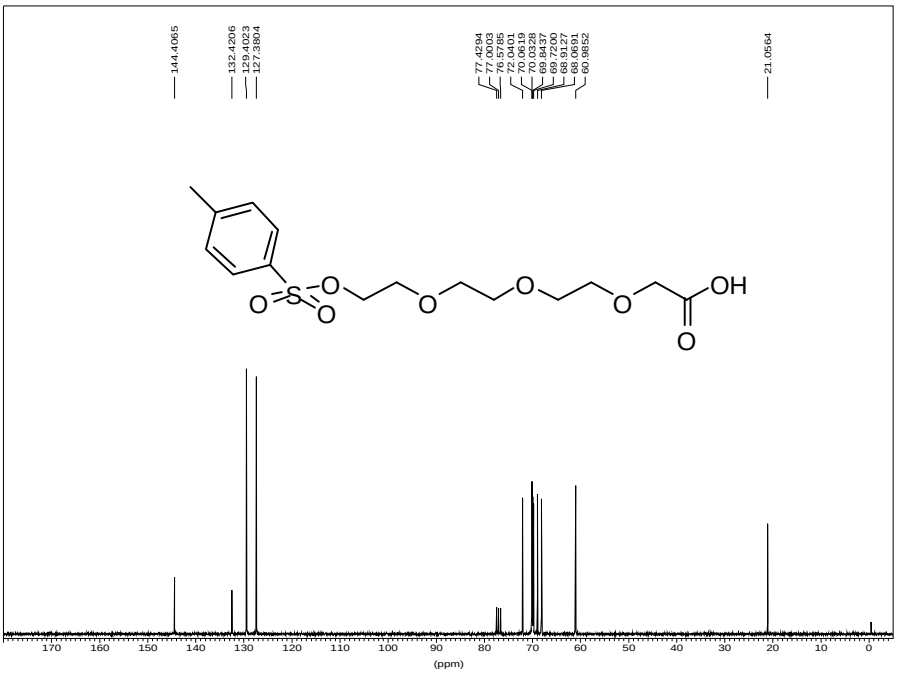


*** Current Data Parameters ***

NAME	:	nv05shb
EXPNO	:	1
PROCNO	:	1
*** Acquisition Parameters ***		
DATE_t	:	22:02:14
DATE_d	:	Nov 04 2008
NS	:	8
SFO1	:	300.1318534 MHz
SOLVENT	:	CDCl3
*** Processing Parameters ***		
SF	:	300.1299663 MHz
XDIM	:	8192
*** 1D NMR Plot Parameters ***		
Start	:	10.00 ppm
Stop	:	-0.50 ppm
YScale	:	100.00 %
SR	:	-33.66 Hz
Hz_cm	:	151.51

13C Standard AC300

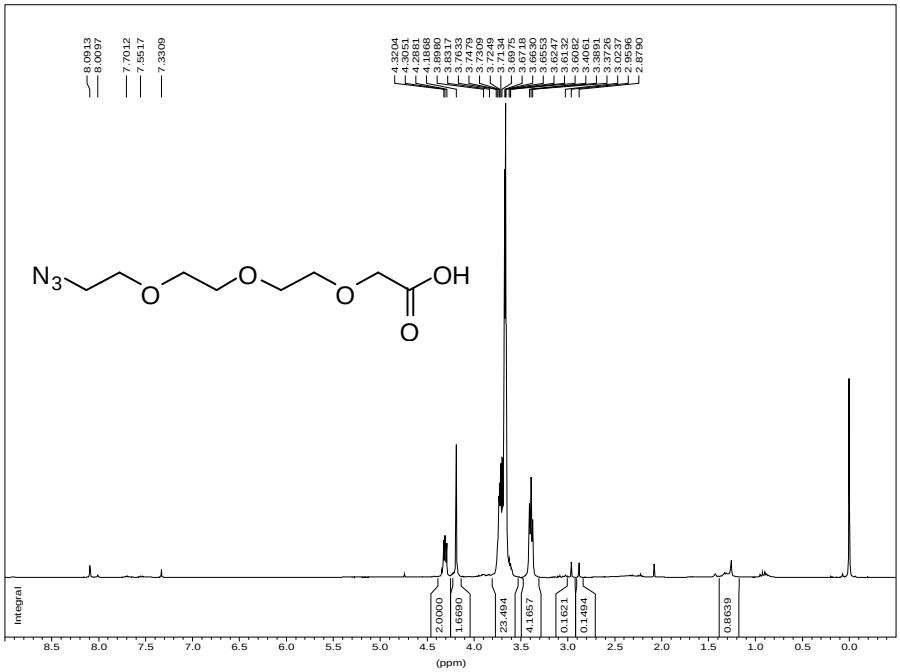
TsO-PEG-OH



*** Current Data Parameters ***

NAME	:	nv05shb
EXPNO	:	2
PROCNO	:	1
*** Acquisition Parameters ***		
DATE_t	:	22:03:58
DATE_d	:	Nov 04 2008
NS	:	98
SFO1	:	75.4756731 MHz
SOLVENT	:	CDCl3
*** Processing Parameters ***		
SF	:	75.4677807 MHz
XDIM	:	64
*** 1D NMR Plot Parameters ***		
Start	:	180.00 ppm
Stop	:	-5.00 ppm
YScale	:	200.00 %
SR	:	31.73 Hz
Hz_cm	:	671.21

1H normal range AC300

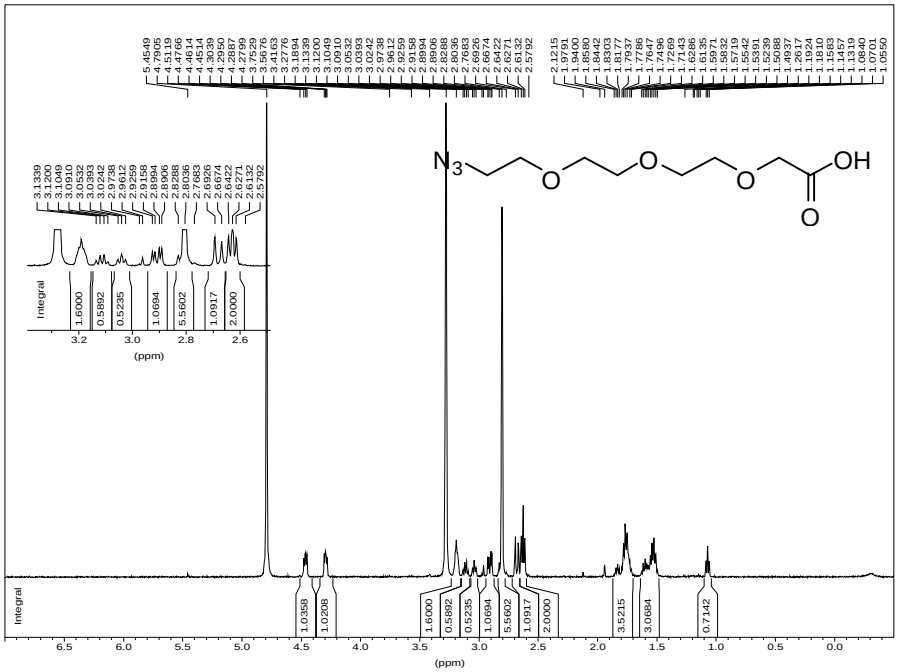


*** Current Data Parameters ***

NAME	:	nv08shb
EXPNO	:	1
PROCNO	:	1
*** Acquisition Parameters ***		
DATE_t	:	01:49:18
DATE_d	:	Nov 07 2008
NS	:	8
SFO1	:	300.1318534 MHz
SOLVENT	:	CDCl3
*** 1D NMR Plot Parameters ***		
Start	:	9.00 ppm
Stop	:	-0.50 ppm
SR	:	-9.39 Hz

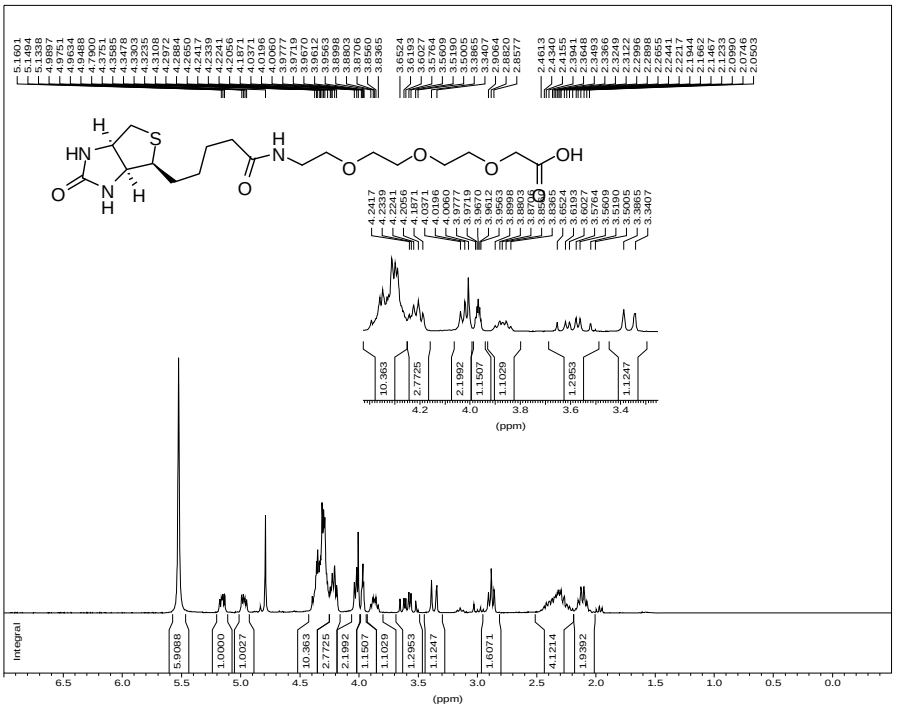
1H AMX500

biotin-NHS

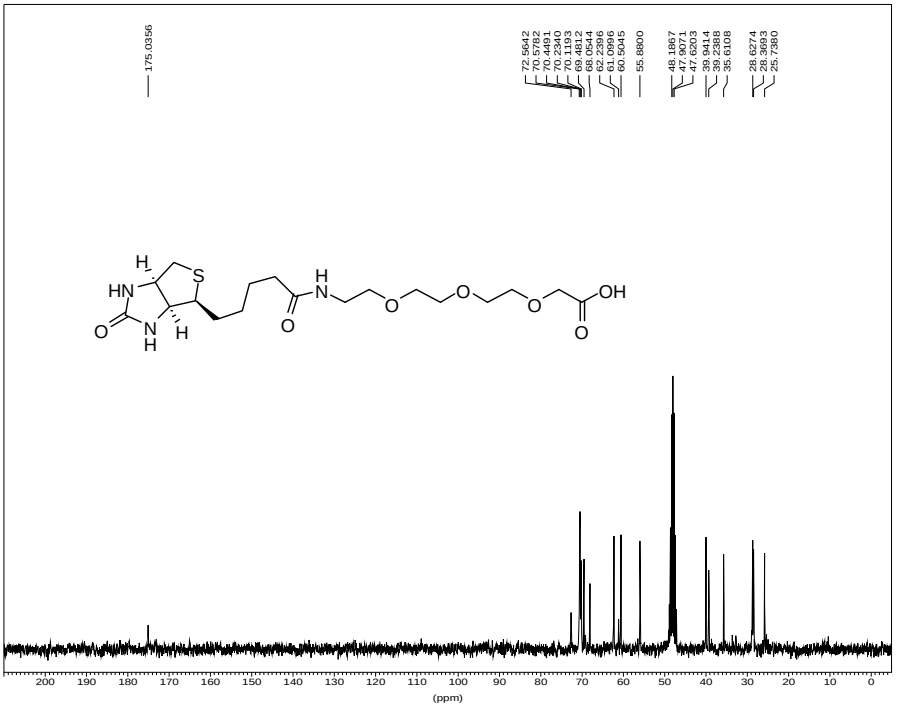


*** Current Data Parameters ***

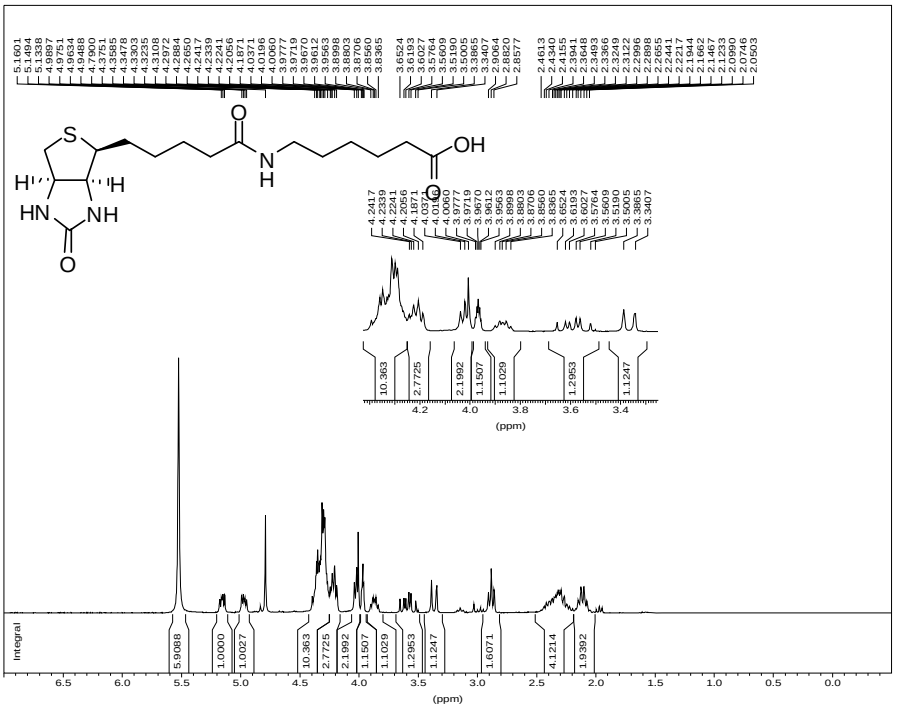
NAME	:	ag14shb
EXPNO	:	1
PROCNO	:	1
*** Acquisition Parameters ***		
DATE_t	:	06:24:50
DATE_d	:	Aug 14 2008
DBPNAM7	:	
DS	:	0
NS	:	8
O1	:	3088.51 Hz
O2	:	3088.51 Hz
O3	:	3088.51 Hz
SFO1	:	500.1330885 MHz
SFO2	:	500.1330885 MHz
SFO3	:	500.1330885 MHz
SOLVENT	:	MeOD
*** Processing Parameters ***		
AZFW	:	0.100 ppm
*** 1D NMR Plot Parameters ***		
SR	:	27.43 Hz



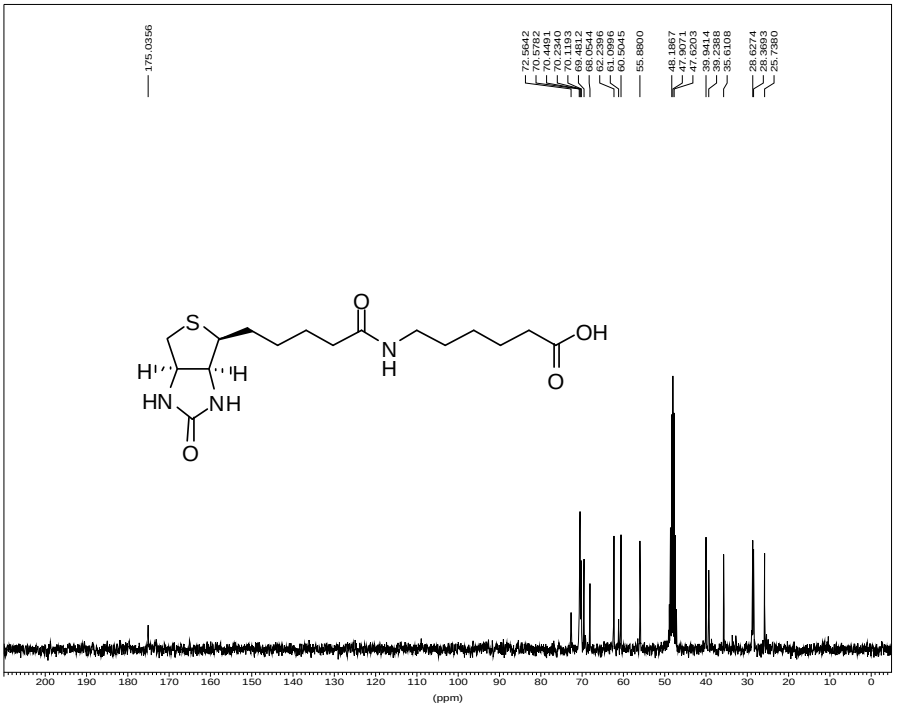
*** Current Data Parameters ***
NAME : nv19shb
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:49:50
DATE_d : Nov 18 2008
NS : 8
SFO1 : 300.1312500 MHz
SOLVENT : MeOD
*** Processing Parameters ***
SF : 300.1298080 MHz
XDIM : 8192
*** 1D NMR Plot Parameters ***
Start : 7.00 ppm
Stop : -0.50 ppm
YScale : 200.00 %
SR : -192.30 Hz
Hz_cm : 108.23



*** Current Data Parameters ***
NAME : nv19shb
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:51:46
DATE_d : Nov 18 2008
NS : 50
SFO1 : 75.4760204 MHz
SOLVENT : CDCl3
*** Processing Parameters ***
SF : 75.4677283 MHz
XDIM : 64
*** 1D NMR Plot Parameters ***
Start : 210.00 ppm
Stop : -5.00 ppm
YScale : 200.00 %
SR : 9.35 Hz
Hz_cm : 780.08

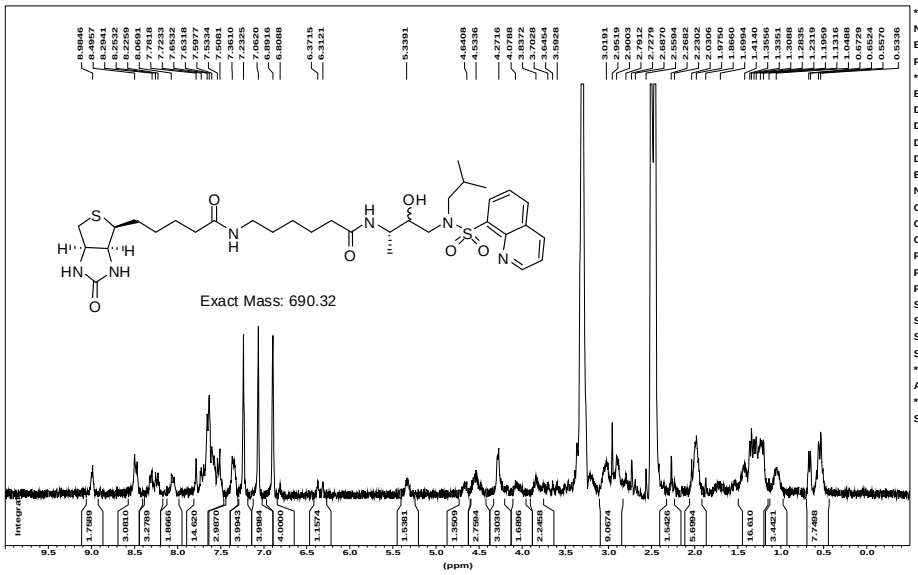


*** Current Data Parameters ***
NAME : nv19shb
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:49:50
DATE_d : Nov 18 2008
NS : 8
SFO1 : 300.1312500 MHz
SOLVENT : MeOD
*** Processing Parameters ***
SF : 300.1298080 MHz
XDIM : 8192
*** 1D NMR Plot Parameters ***
Start : 7.00 ppm
Stop : -0.50 ppm
YScale : 200.00 %
SR : -192.30 Hz
Hz_cm : 108.23



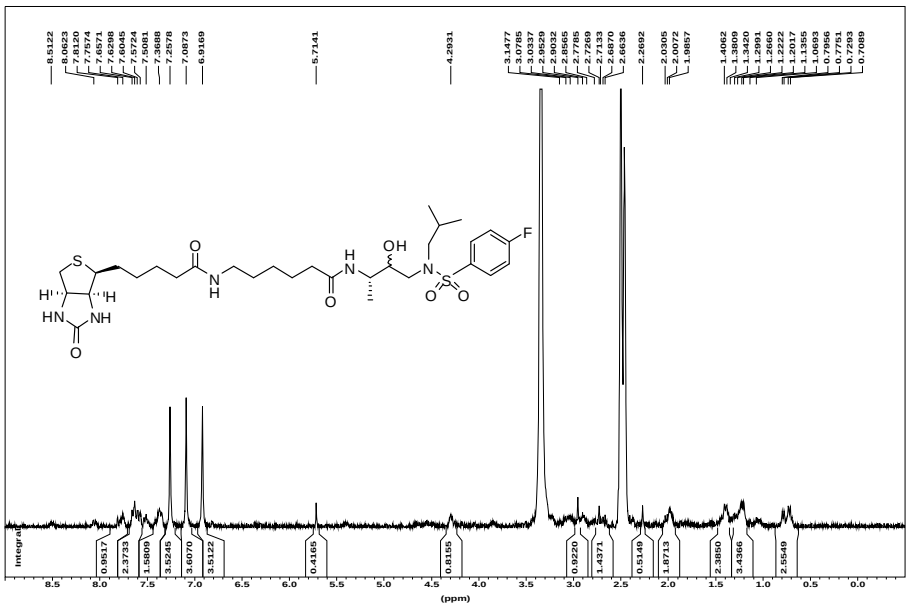
*** Current Data Parameters ***
NAME : nv19shb
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:51:46
DATE_d : Nov 18 2008
NS : 50
SFO1 : 75.4760204 MHz
SOLVENT : CDCl3
*** Processing Parameters ***
SF : 75.4677283 MHz
XDIM : 64
*** 1D NMR Plot Parameters ***
Start : 210.00 ppm
Stop : -5.00 ppm
YScale : 200.00 %
SR : 9.35 Hz
Hz_cm : 780.08

Biotin-ala-1



*** Current Data Parameters ***
NAME : 2603shb
EXPNO : 9
PROCNO : 1
*** Acquisition Parameters ***
BF1 : 300.1300000 MHz
DATE_t : 18:06:20
DATE_d : Mar 25 2009
DBPNAM7 :
DS : 0
EXP :
NS : 10
O1 : 1250.00 Hz
O2 : 1853.43 Hz
O3 : 1853.43 Hz
P[1] : 10.0 usec
P[2] : 20.0 usec
P[3] : 0.0 usec
SFO1 : 300.1312500 MHz
SFO2 : 300.1318534 MHz
SFO3 : 300.1318534 MHz
SOLVENT : DMSO
*** Processing Parameters ***
AZFW : 0.100 ppm
*** 1D NMR Plot Parameters ***
SR : 13.85 Hz

Biotin-ala-2



*** Current Data Parameters ***
NAME : 2603shb
EXPNO : 6
PROCNO : 1
*** Acquisition Parameters ***
BF1 : 300.1300000 MHz
DATE_t : 17:57:12
DATE_d : Mar 25 2009
DBPNAM7 :
DS : 0
EXP :
NS : 10
O1 : 1250.00 Hz
O2 : 1853.43 Hz
O3 : 1853.43 Hz
P[1] : 10.0 usec
P[2] : 20.0 usec
P[3] : 0.0 usec
SFO1 : 300.1312500 MHz
SFO2 : 300.1318534 MHz
SFO3 : 300.1318534 MHz
SOLVENT : DMSO
*** Processing Parameters ***
AZFW : 0.100 ppm
*** 1D NMR Plot Parameters ***
SR : 13.56 Hz