

FIG. 1

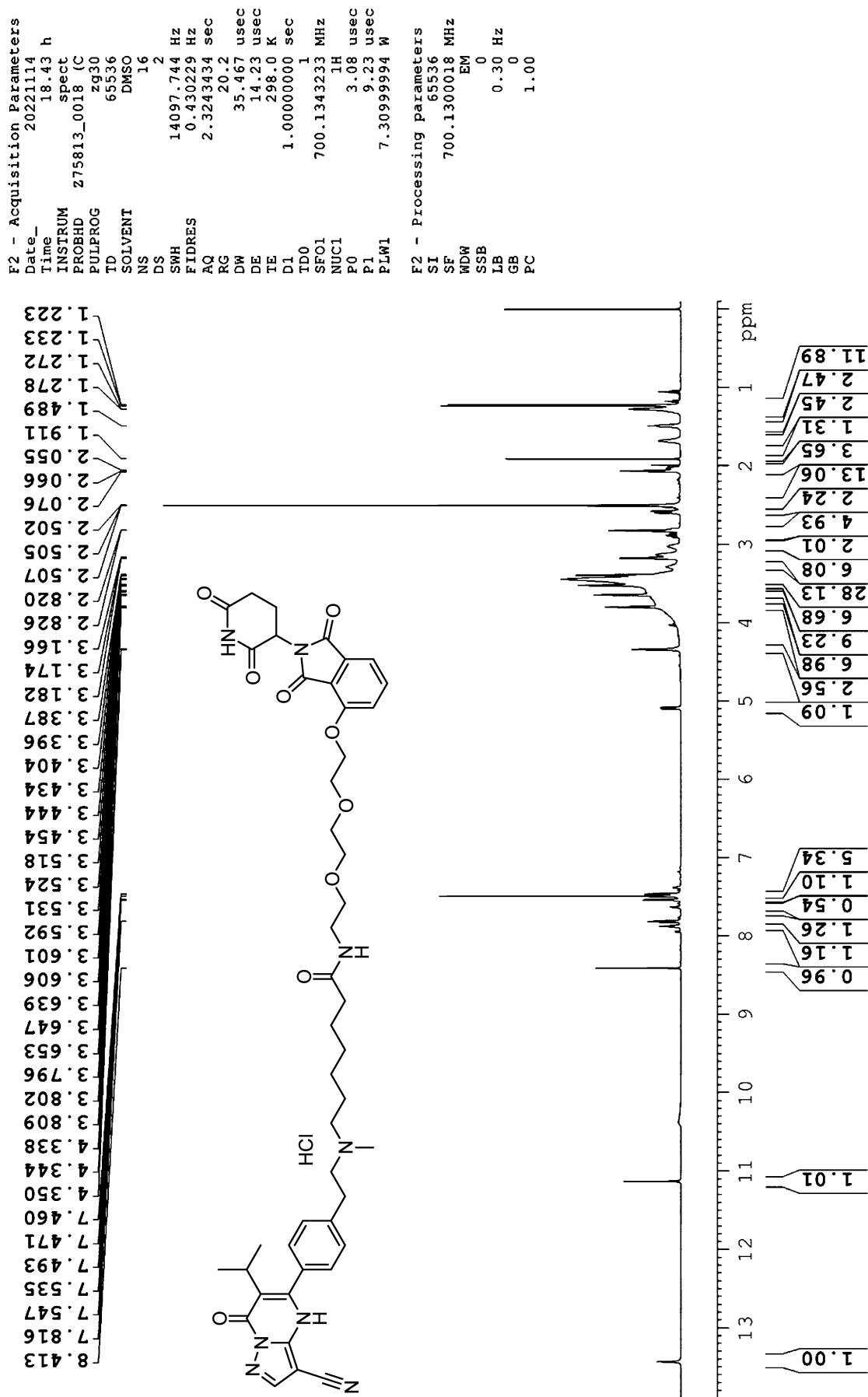
¹H NMR (Compound 14a in DMSO-d₆)

FIG. 2

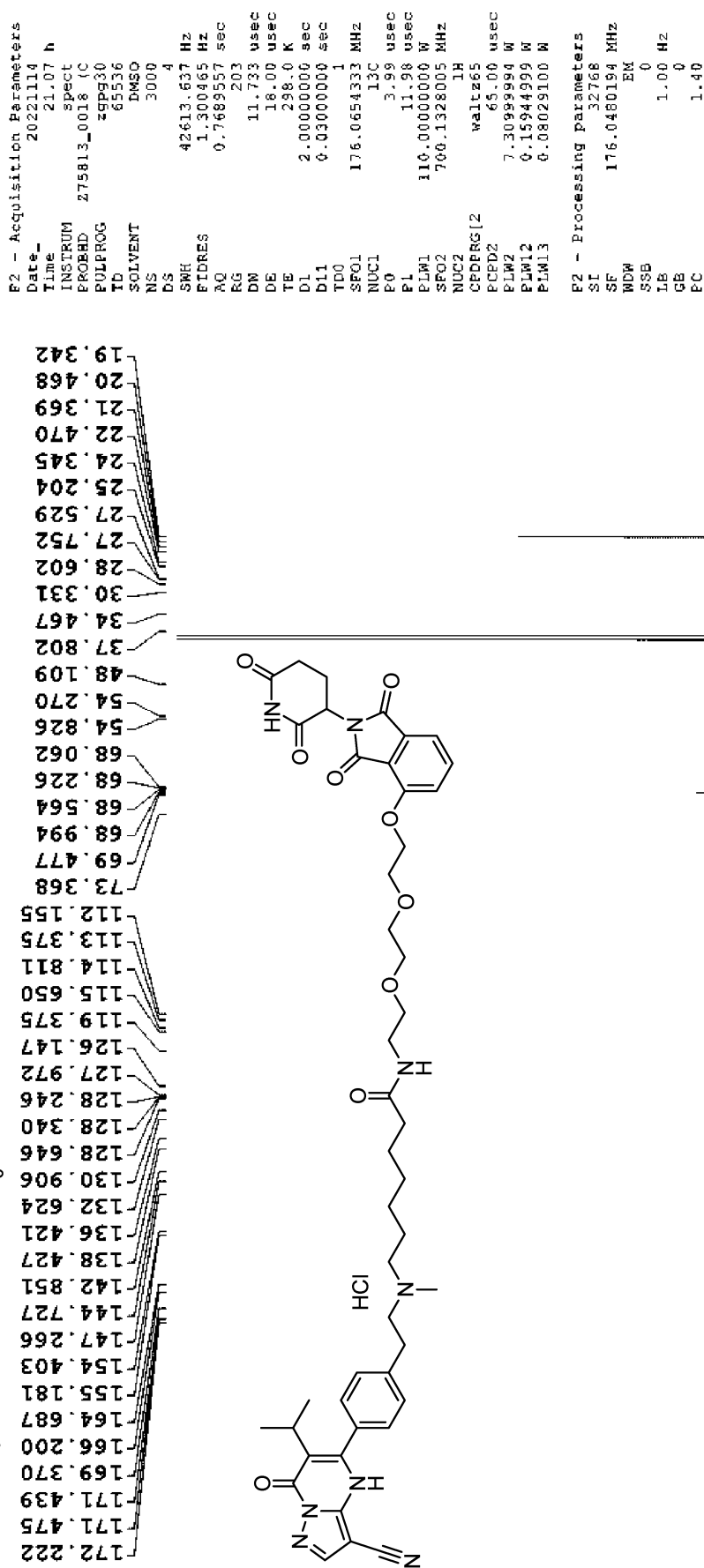
¹³CNMR (Compound 14a in DMSO-d₆)

FIG. 3

HPLC (Compound 14a)

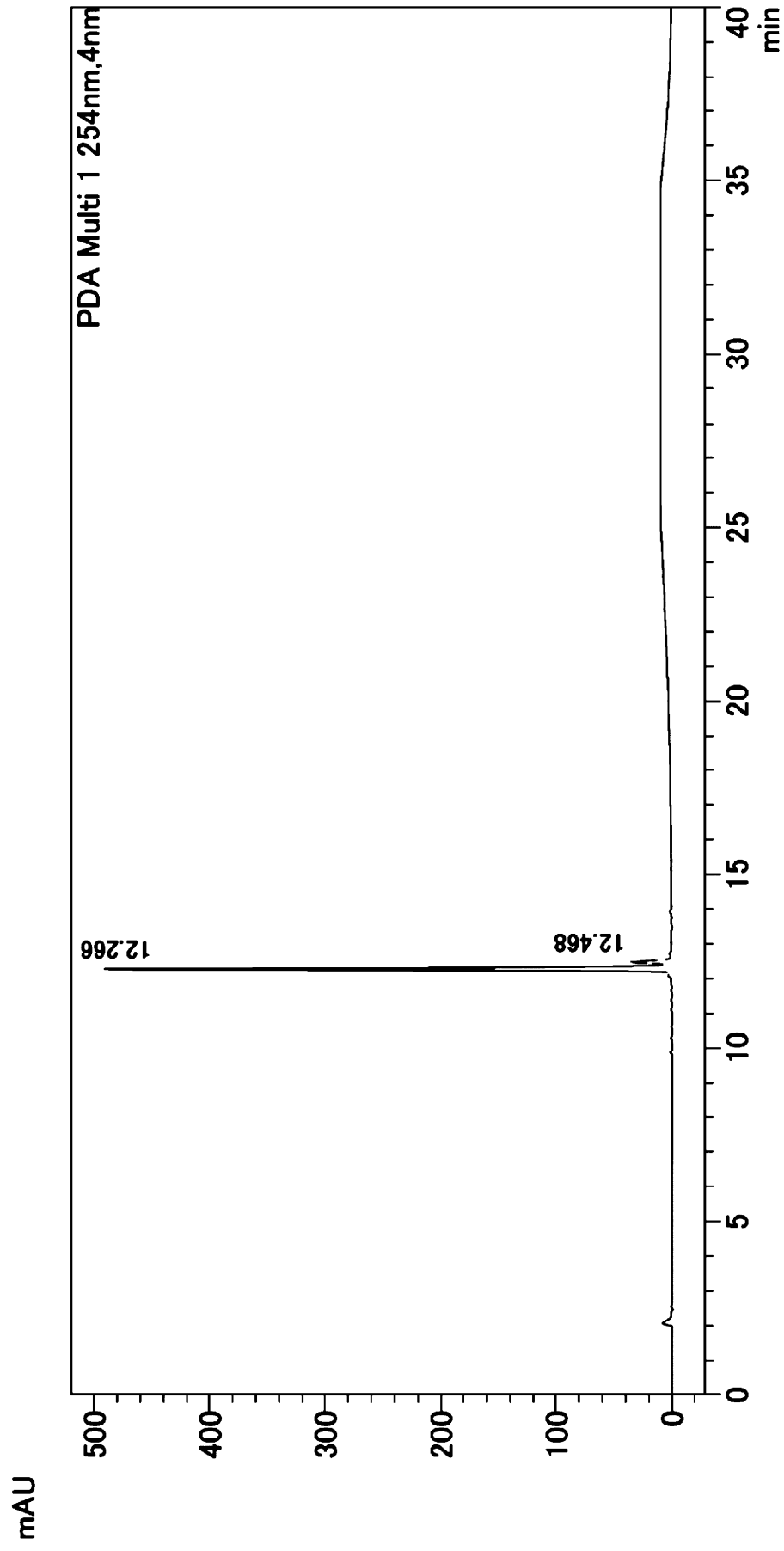


FIG. 4

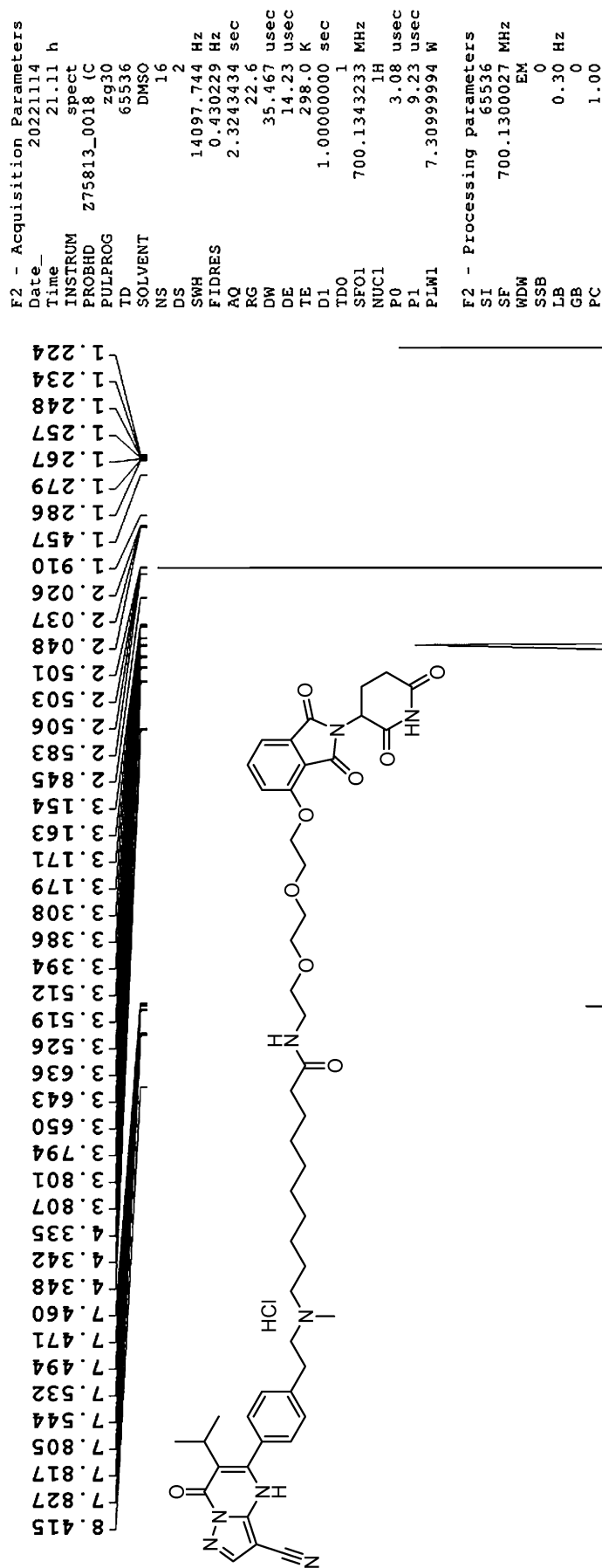
¹HNMR (Compound 14b in DMSO-d₆)

FIG. 5

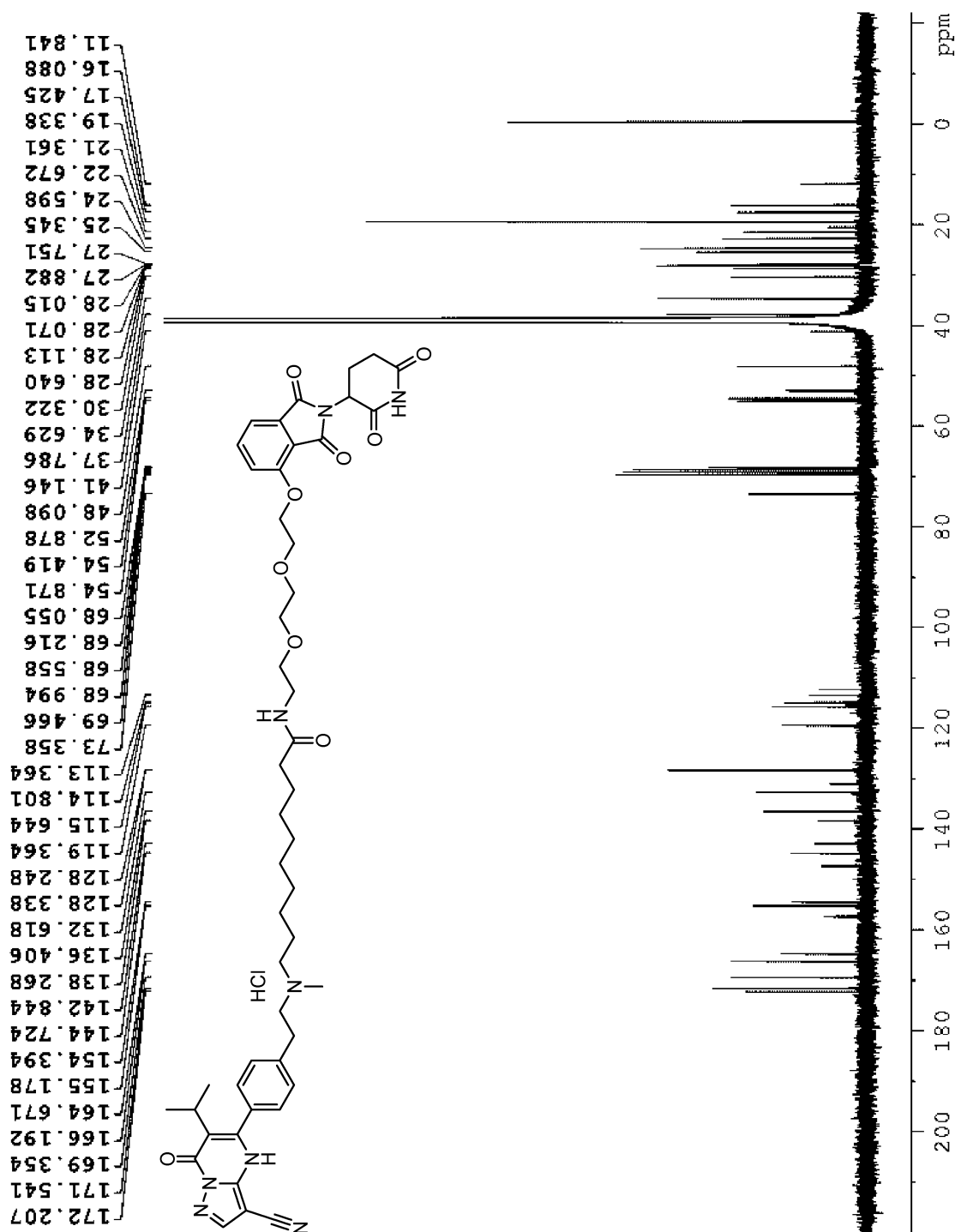
¹³CNMR (Compound 14b in DMSO-d₆)

FIG. 6

HPLC (Compound 14b)

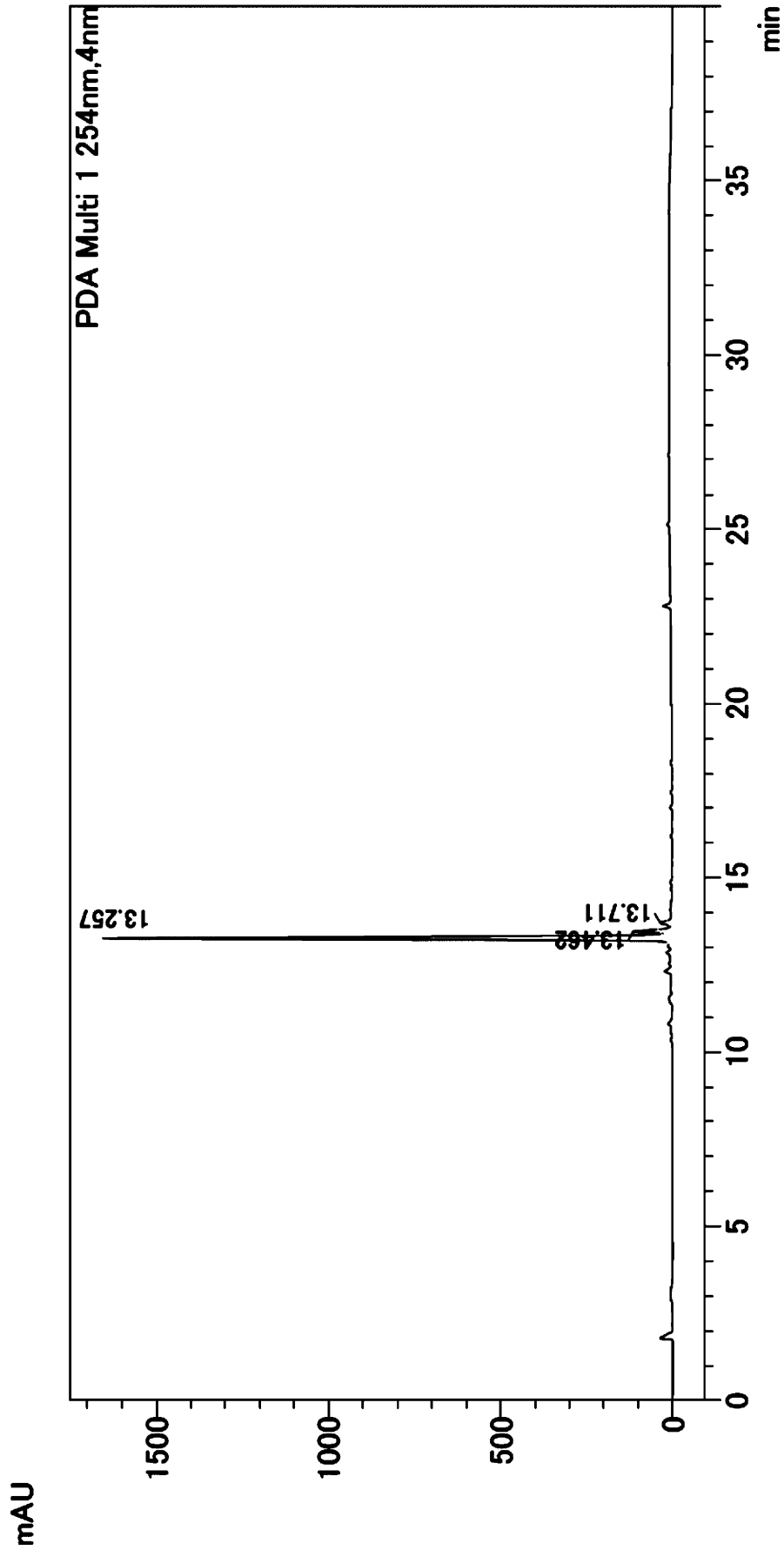


FIG. 7

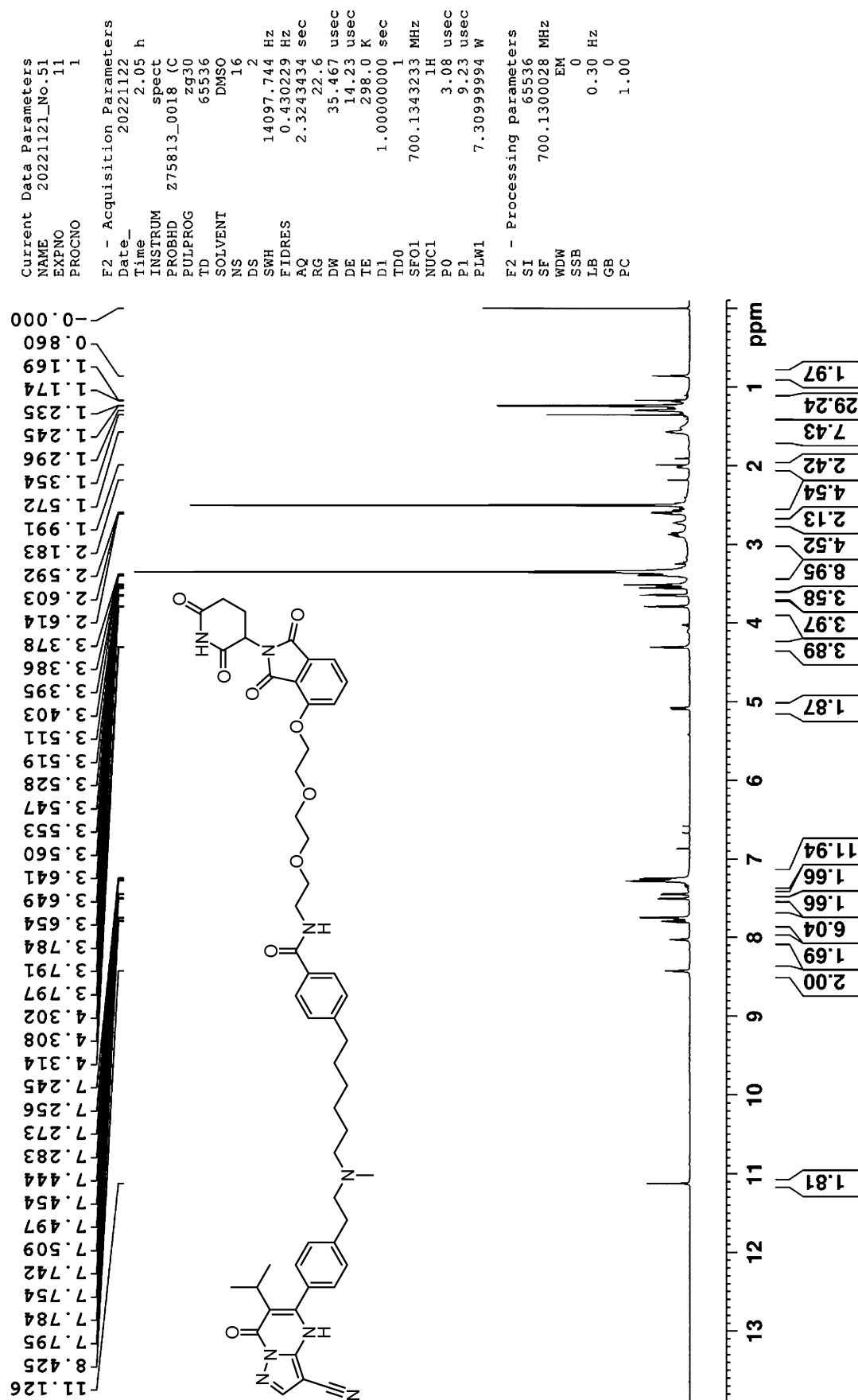
¹H NMR (Compound 20a in DMSO-d₆)

FIG. 8

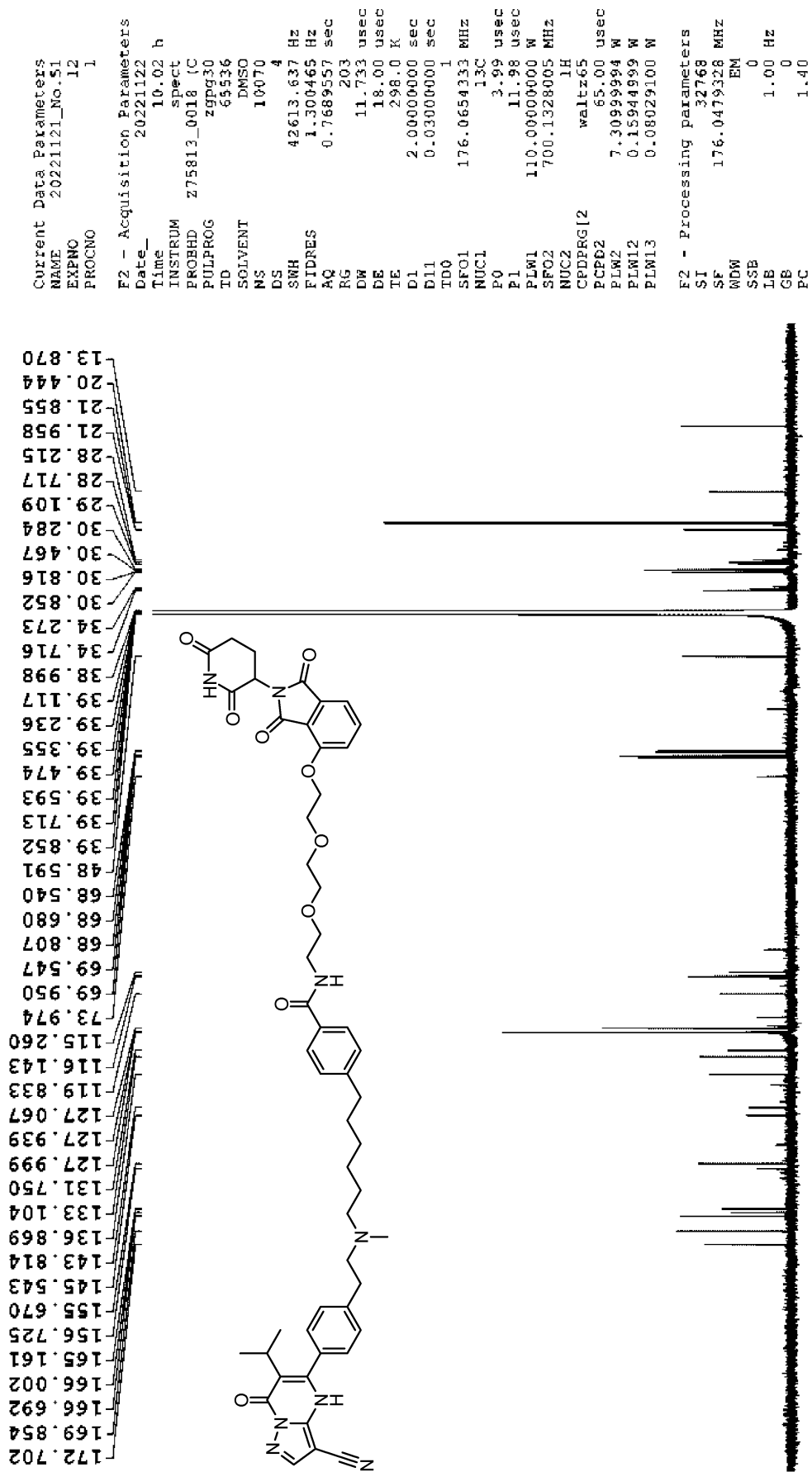
¹³CNMR (Compound 20a in DMSO-d₆)

FIG. 9

HPLC (Compound 20a)
mAU

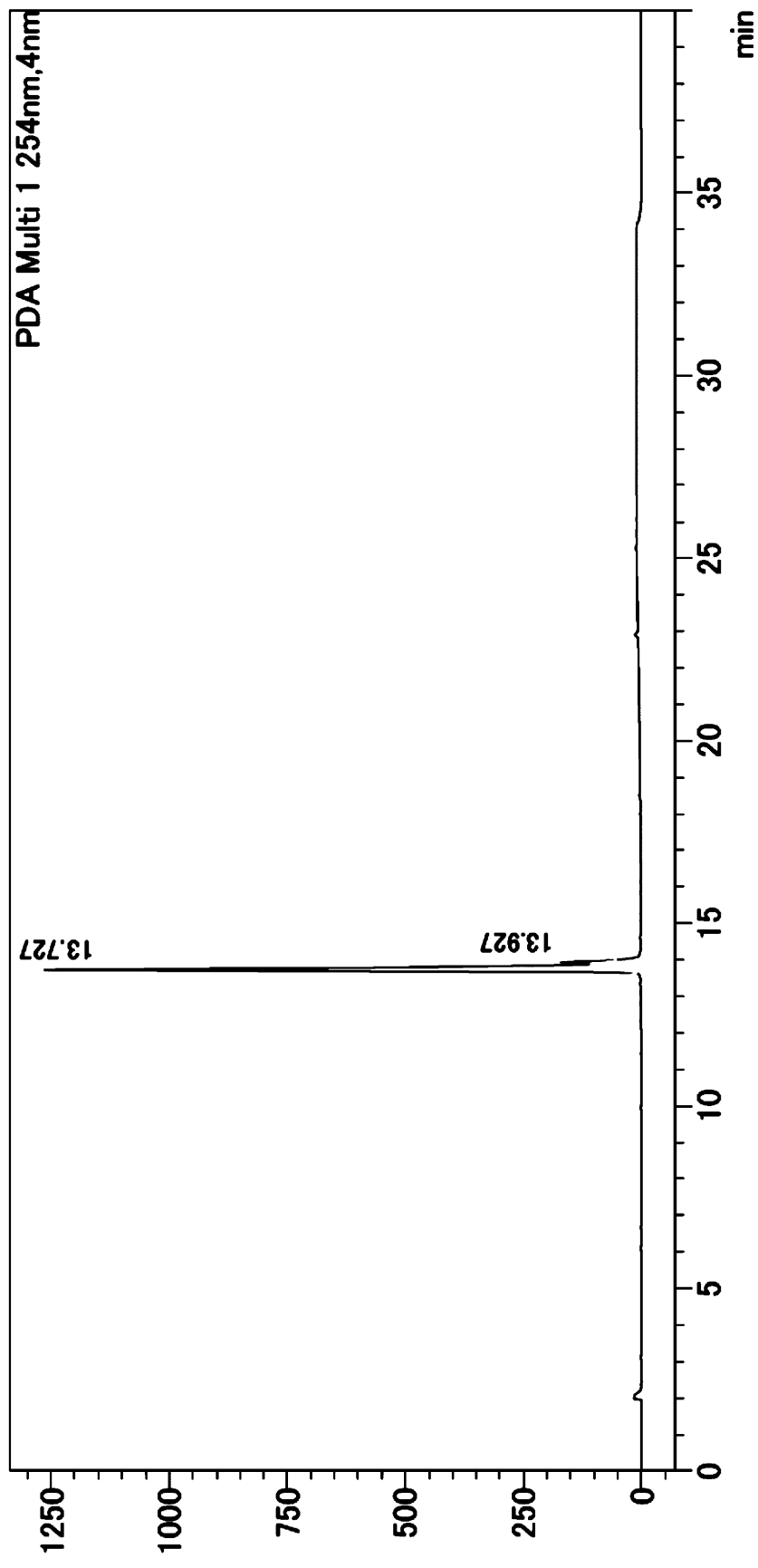
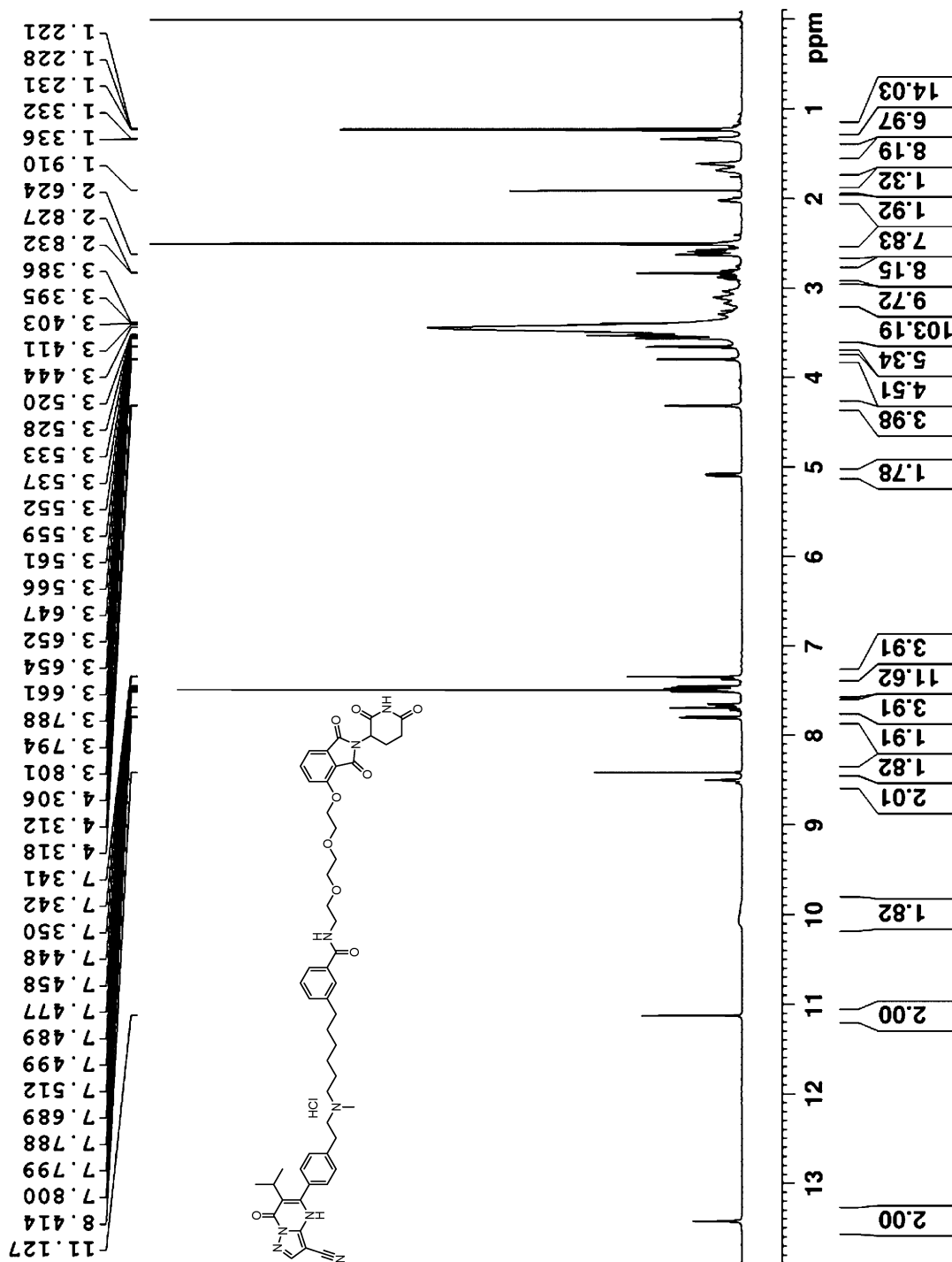


FIG. 10

¹HNMR (Compound 20b in DMSO-d₆)



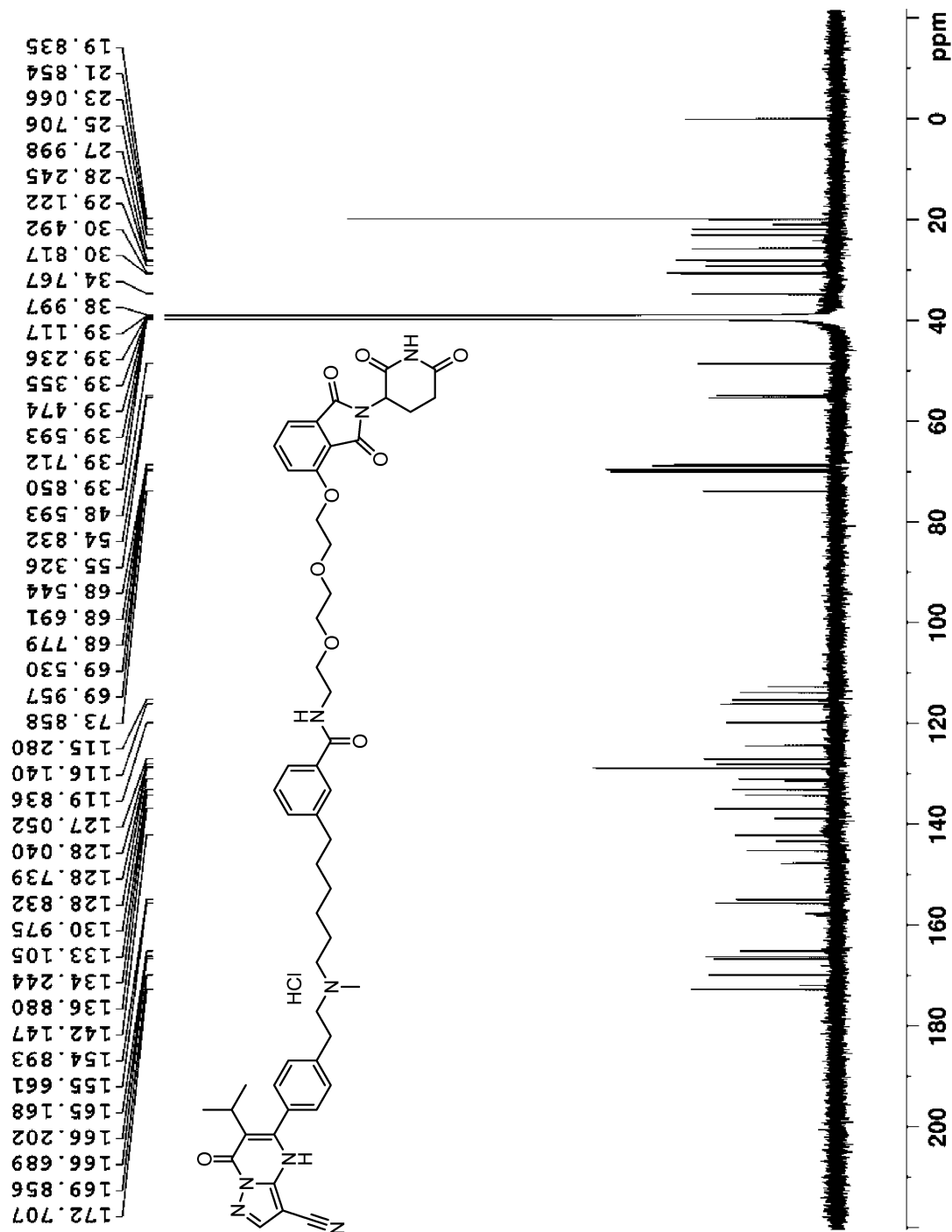
Current Data Parameters
 NAME 20221121_No.52
 EXPNO 10
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20221121
 Time 17.50 h
 INSTRUM spect
 PROBD Z75813_0018 (C
 PULPROG zg30
 TD 65536
 SOLVENT DMSO
 NS 16
 DS 2
 SWH 14097.744 Hz
 FIDRES 0.430229 Hz
 AQ 2.3243434 sec
 RG 20.2
 DW 35.467 usec
 DE 14.23 usec
 TE 298.0 K
 D1 1.00000000 sec
 TD0 1
 SF01 700.1343233 MHz
 NUC1 ¹H
 P0 3.08 usec
 P1 9.23 usec
 PLW1 7.30999994 W

F2 - Processing parameters
 SI 65536
 SF 700.1300027 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

FIG. 11

¹³CNMR (Compound 20b in DMSO-d₆)



Current Data Parameters
NAME 20221121_No.52
EXPNO 11
PROCNO 1

F2 - Acquisition Parameters
Date_ 20221122
Time 19.48 h
INSTRUM spect
PROBHD 275813_0018 (C
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 10240
DS 4
SWH 42613.637 Hz
FIDRES 1.300465 Hz
AQ 0.7689557 sec
RG 203
DE 11.733 usec
TE 18.00 usec
TE 298.0 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1
SF01 176.0654333 MHz
NUC1 13C
P0 3.99 usec
P1 11.98 usec
PLW1 110.0000000 W
SF02 700.1328005 MHz
NUC2 1H
PCPD2 waltz65
PCPD2 65.00 usec
PLW2 7.30999994 W
PLW12 0.15944999 W
PLW13 0.08029100 W

F2 - Processing parameters
SI 32768
SF 176.0479329 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

FIG. 12

HPLC (Compound 20b)

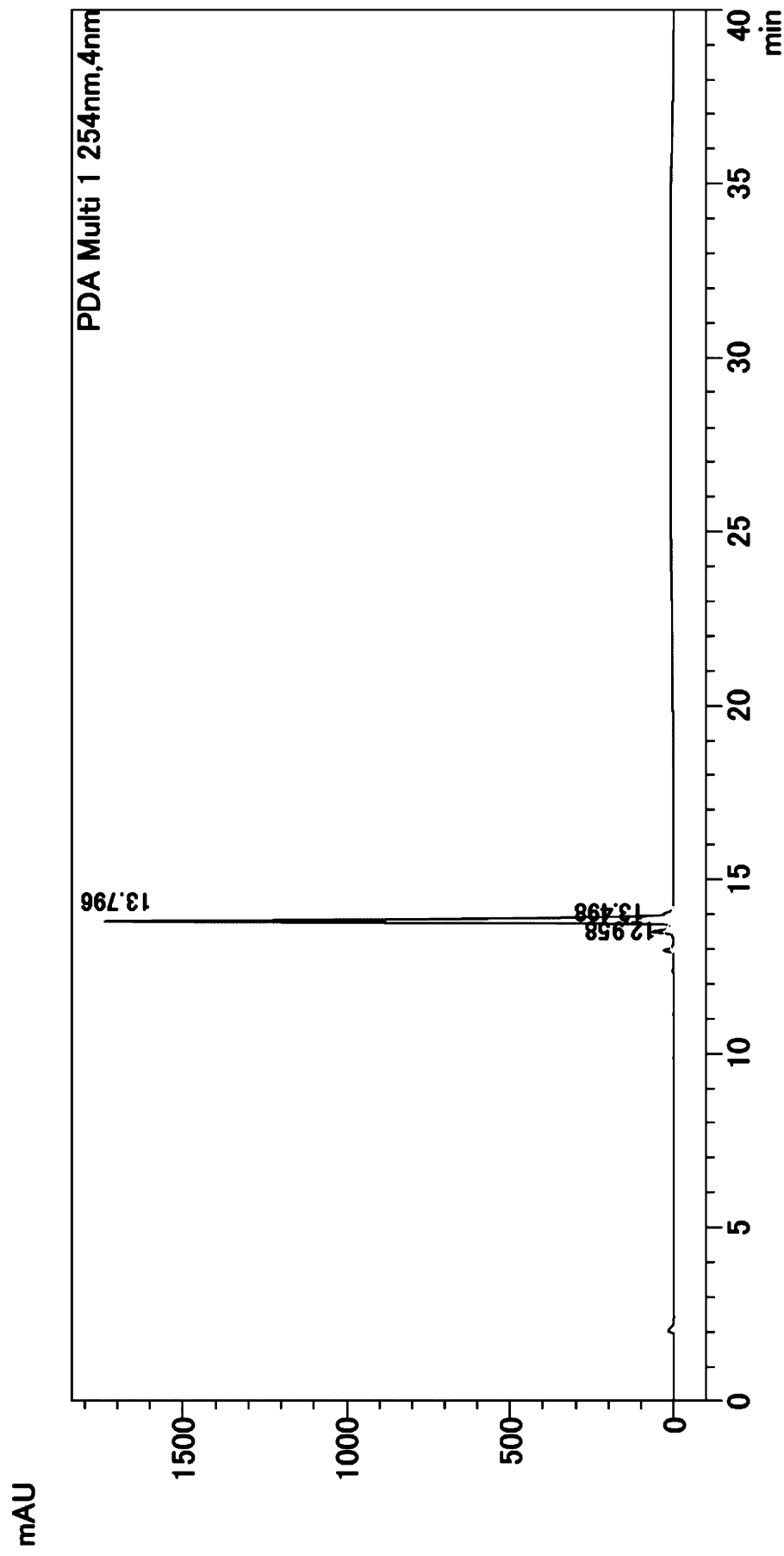
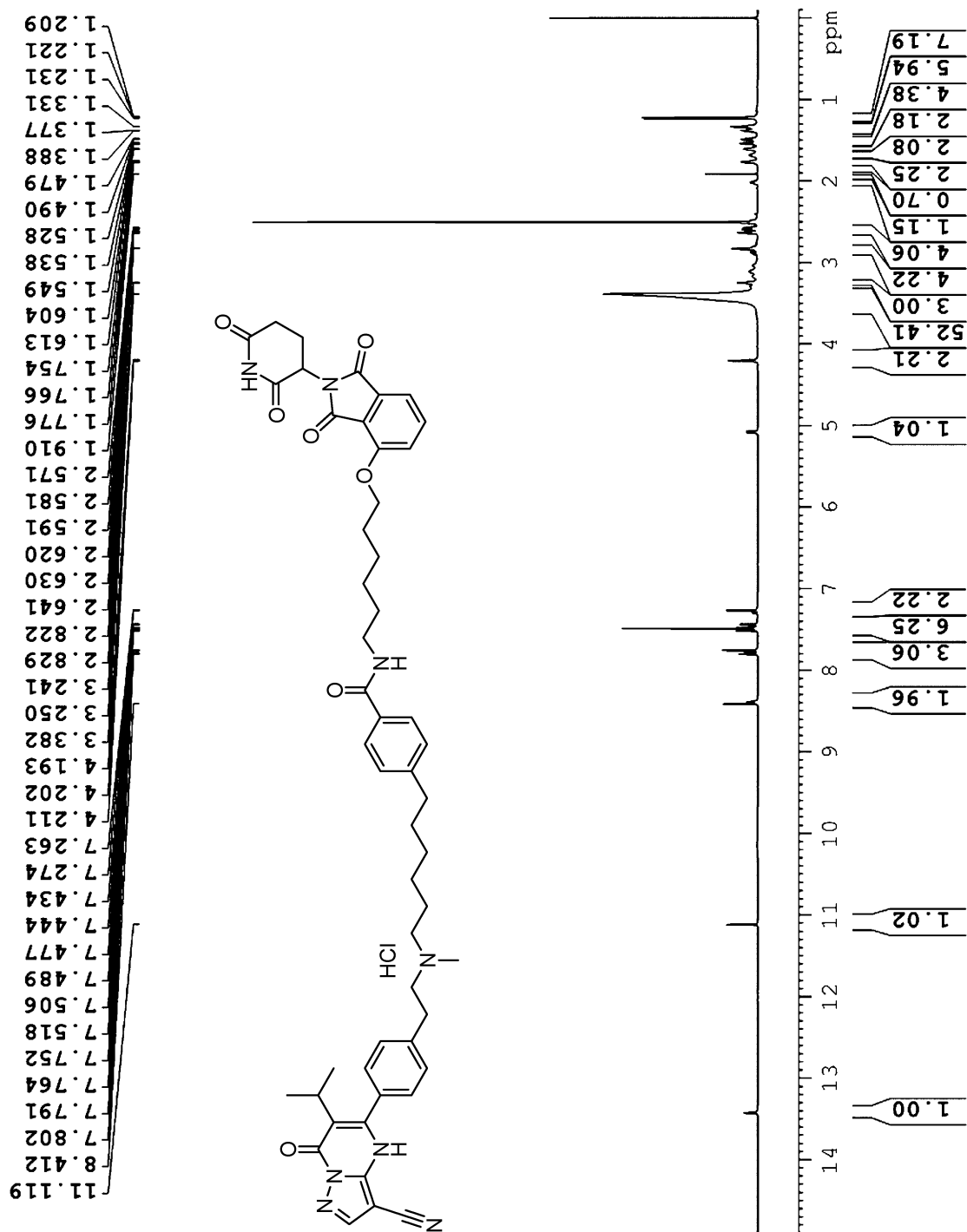


FIG. 13

¹HNMR (Compound 23a in DMSO-d₆)

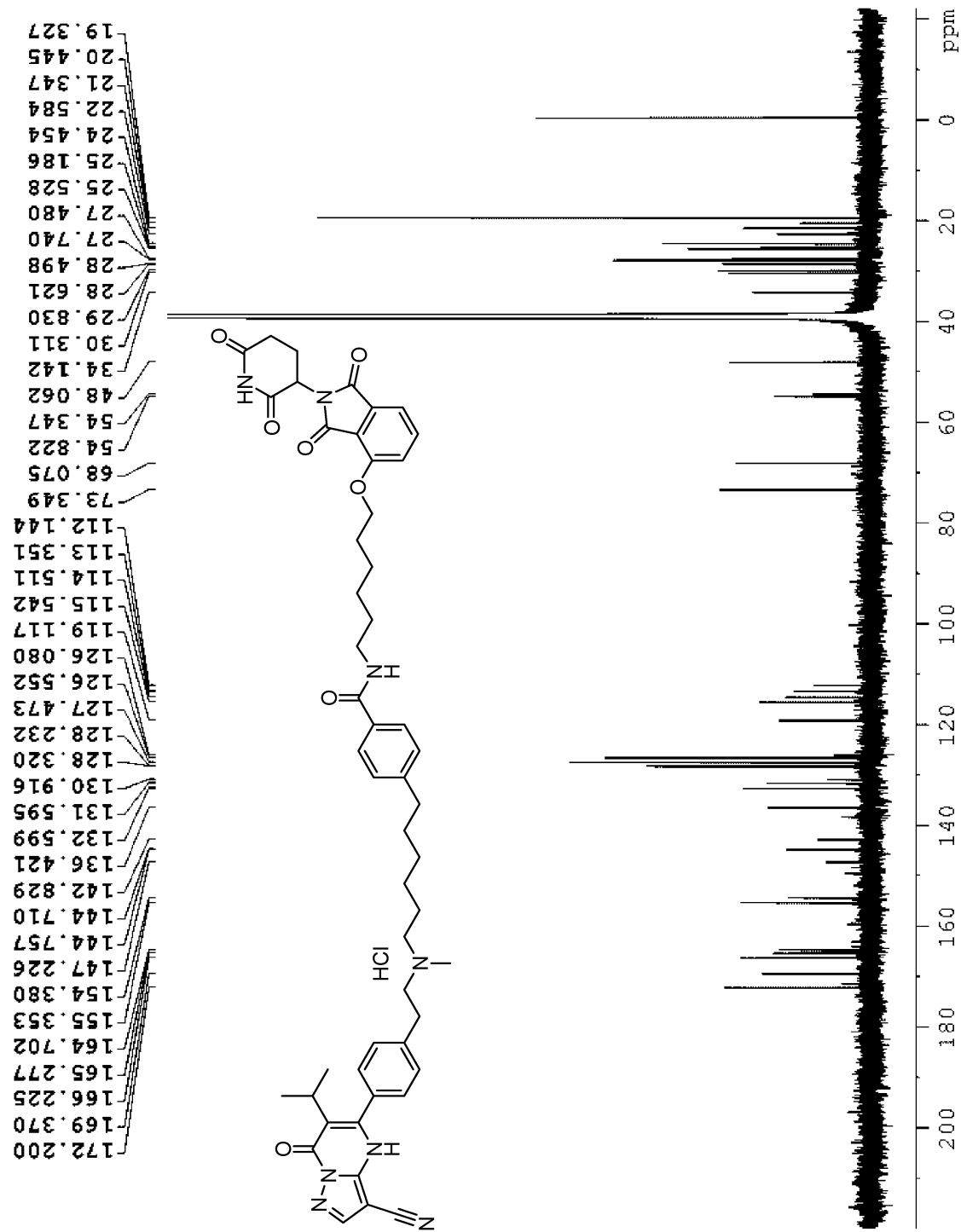


F2 - Acquisition Parameters
 Date_ 20221201
 Time 16.48 h
 INSTRUM spect
 PROBHD 275813_0018 (C
 PULPROG zg30
 TD 65536
 SOLVENT DMSO
 NS 16
 DS 2
 SWH 14097.744 Hz
 FIDRES 0.430229 Hz
 AQ 2.3243434 sec
 RG 18
 DW 35.467 usec
 DE 14.23 usec
 TE 298.0 K
 D1 1.00000000 sec
 TD0 1
 SF01 700.1343233 MHz
 NUC1 1H
 P0 3.08 usec
 P1 9.23 usec
 PLW1 7.30999994 W

F2 - Processing parameters
 SI 65536
 SF 700.1300031 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

FIG. 14

¹³CNMR (Compound 23a in DMSO-d₆)



F2 - Acquisition Parameters

Date_	20221202
Time	1.02 h
INSTRUM	spect
PROBHD	275813.0018 TC
PULPROG	zgpg30
TD	65536
SOLVENT	DMSO
NS	10240
DS	4
SWH	42613.637 Hz
FIDRES	1.300465 Hz
AQ	0.7689557 sec
RG	203
DM	11.733 usec
DE	18.00 usec
TE	298.0 K
D1	2.00000000 sec
D11	0.03000000 sec
TD0	1
SFO1	176.0654333 MHz
NUC1	13C
P0	3.99 usec
P1	11.98 usec
PLW1	110.00000000 W
SFO2	700.1328005 MHz
NUC2	1H
PCPD2	waltz65
PCPD2	65.00 usec
PLW2	7.30999994 W
PLW12	0.15944999 W
PLW13	0.08029100 W

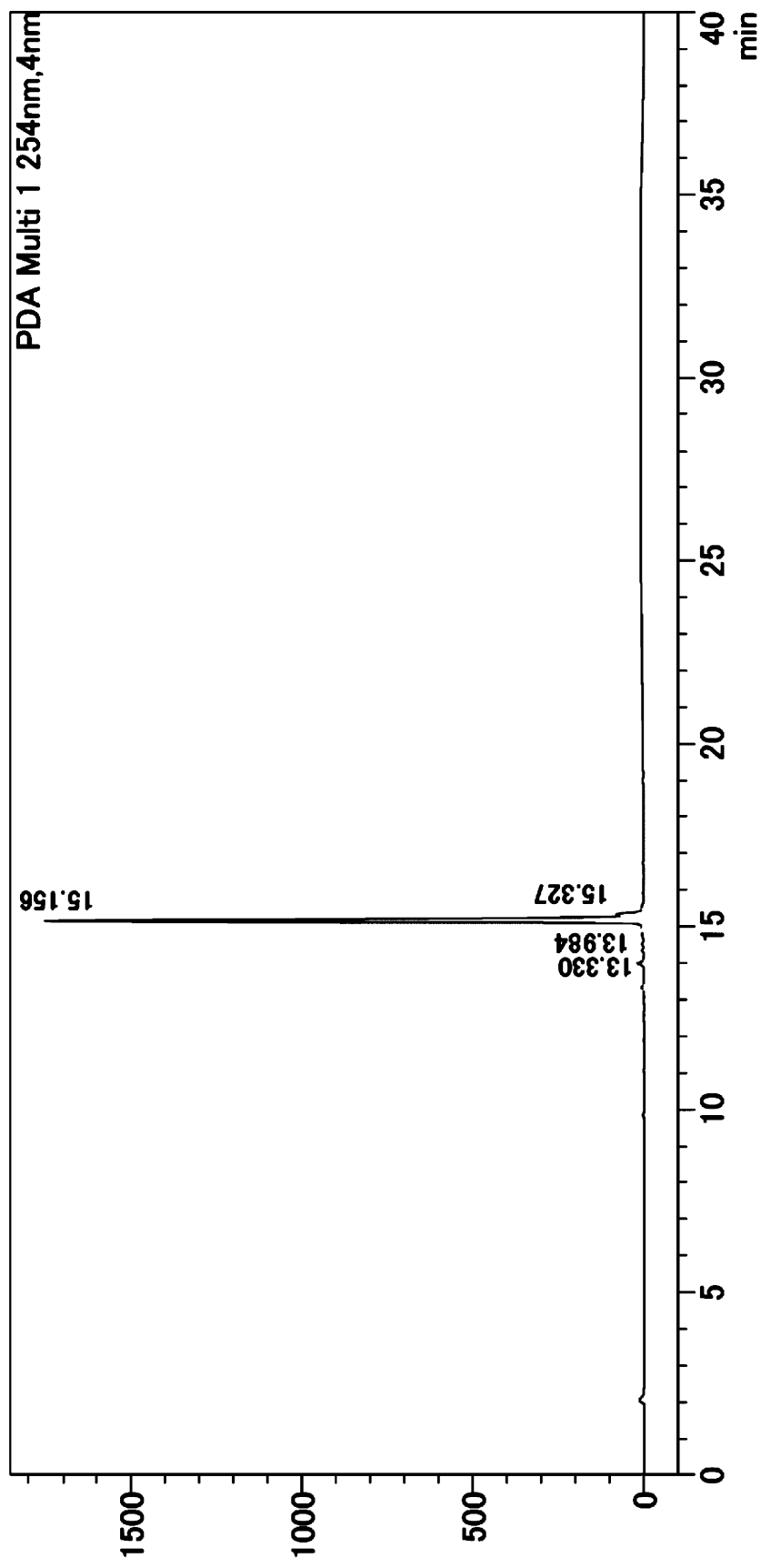
F2 - Processing parameters

SI	32768
SF	176.0480237 MHz
WDW	EM
SSB	0
LB	1.00 Hz
GB	0
PC	1.40

FIG. 15

HPLC (Compound 23a)

mAU



Retention time	Area	%Area
13.330	31766	0.309
13.984	78052	0.760
15.156	9796564	95.440
15.327	358253	3.490

FIG. 16

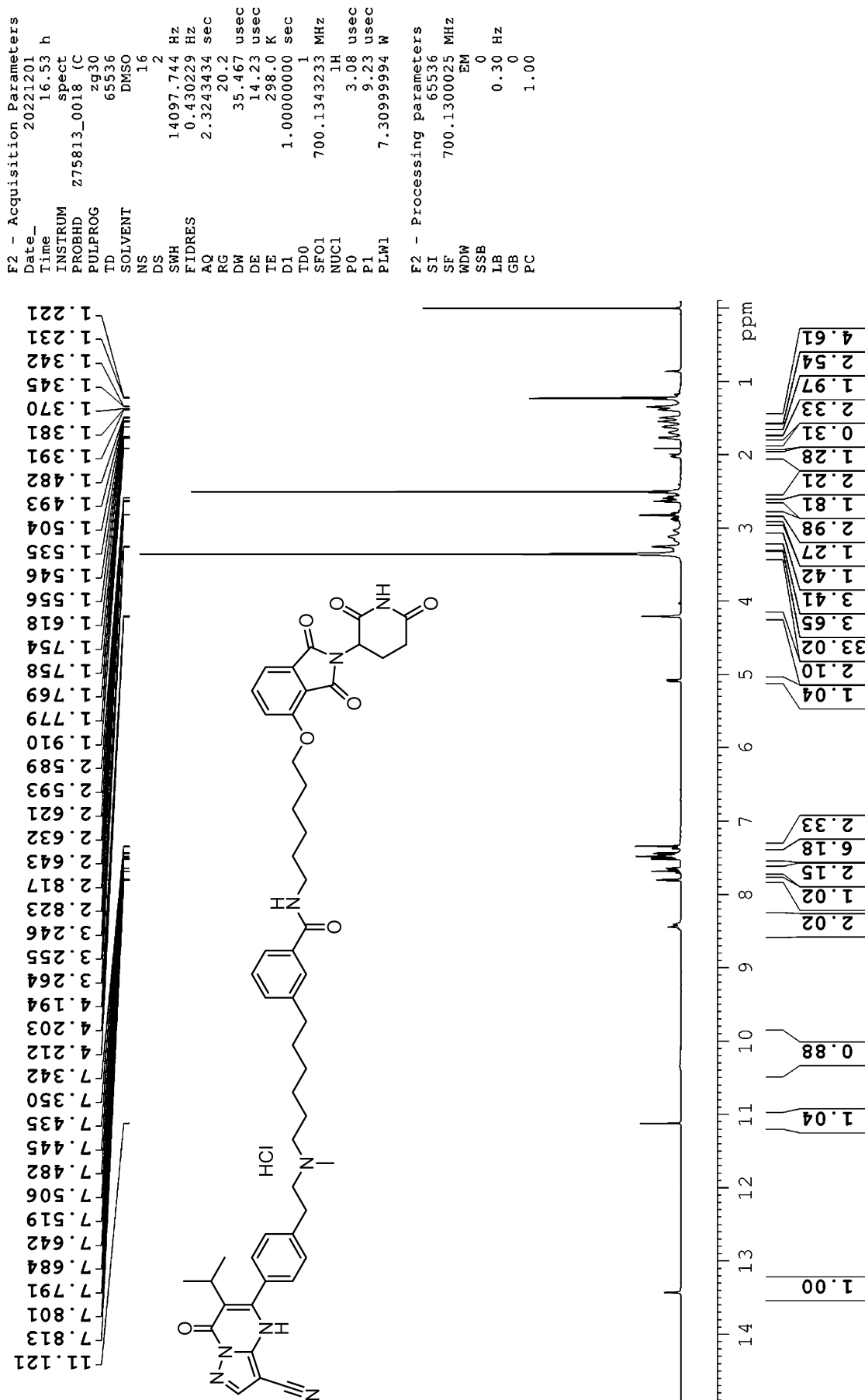
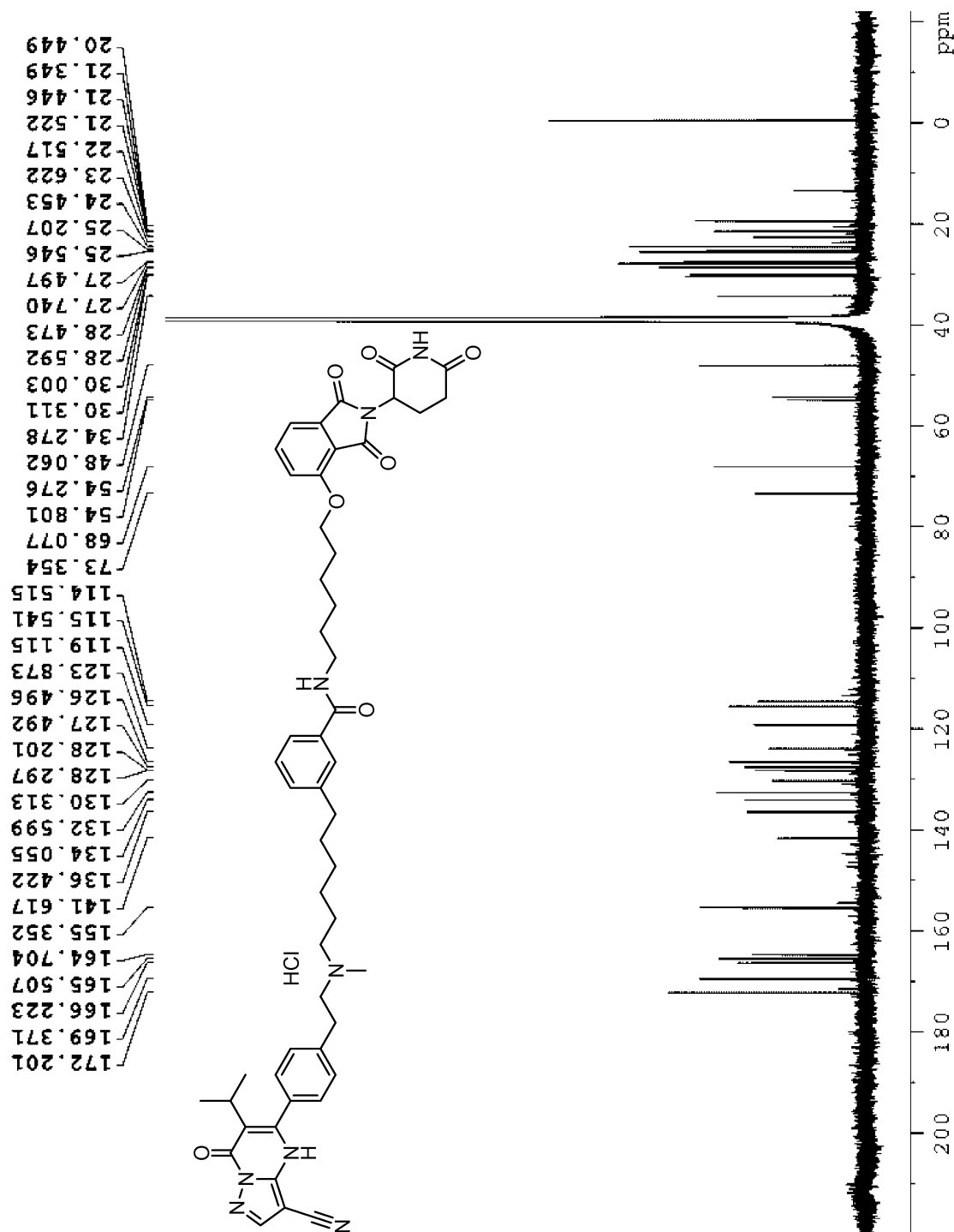
¹H NMR (Compound 23b in DMSO-d₆)

FIG. 17

¹³CNMR (Compound 23b in DMSO-d₆)



F2 - Acquisition Parameters

Date_	20221202
Time	9.09 h
INSTRUM	spect
PROBHD	275H13_0018 (C
PULPROG	zgpg30
ID	65536
SOLVENT	DMSO
NS	10240
DS	4
SMH	42613.637 Hz
FIDRES	1.300465 Hz
AQ	0.7689557 sec
RG	203
DM	11.733 usec
DE	18.00 usec
TE	298.0 K
D1	2.0000000 sec
D11	0.0300000 sec
TDO	1
SFO1	176.0654333 MHz
NUC1	13C
PO	3.99 usec
PL	11.98 usec
PLW1	110.0000000 W
SFO2	700.1328005 MHz
NUC2	1H
CEDEG12	waltz65
PCPD2	65.00 usec
PLW2	7.30999994 W
PLW12	0.15944999 W
PLW13	0.08029100 W

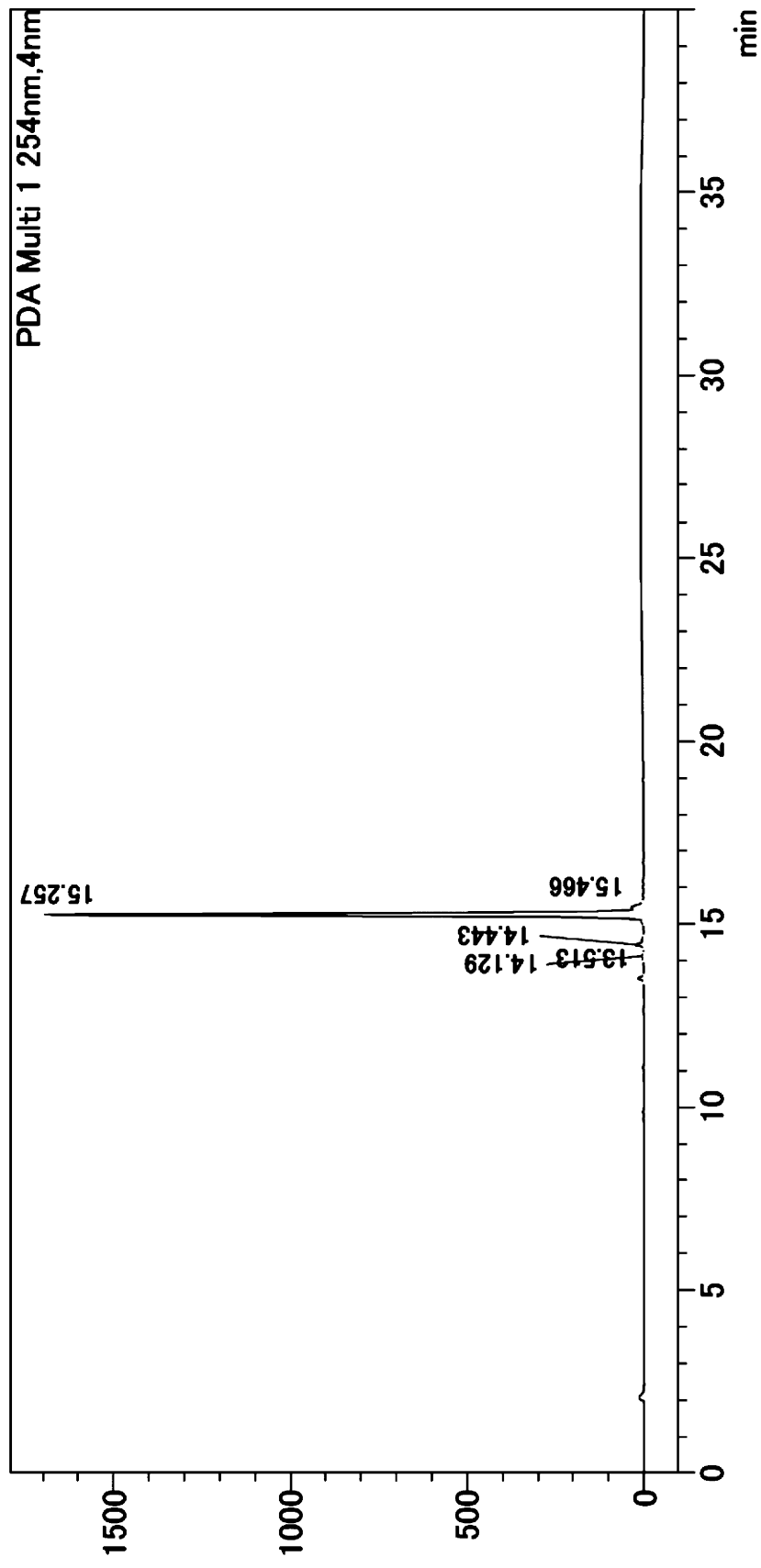
F2 - Processing parameters

SI	32768
SF	176.0480229 MHz
WDW	EM
SSB	0
LB	1.00 Hz
GB	0
PC	1.40

FIG. 18

HPLC (Compound 23b)

mAU



Retention time	Area	%Area
13.513	82645	0.786
14.129	30511	0.290
14.443	148616	1.414
15.257	10055562	95.657
15.466	194786	1.853

FIG. 19

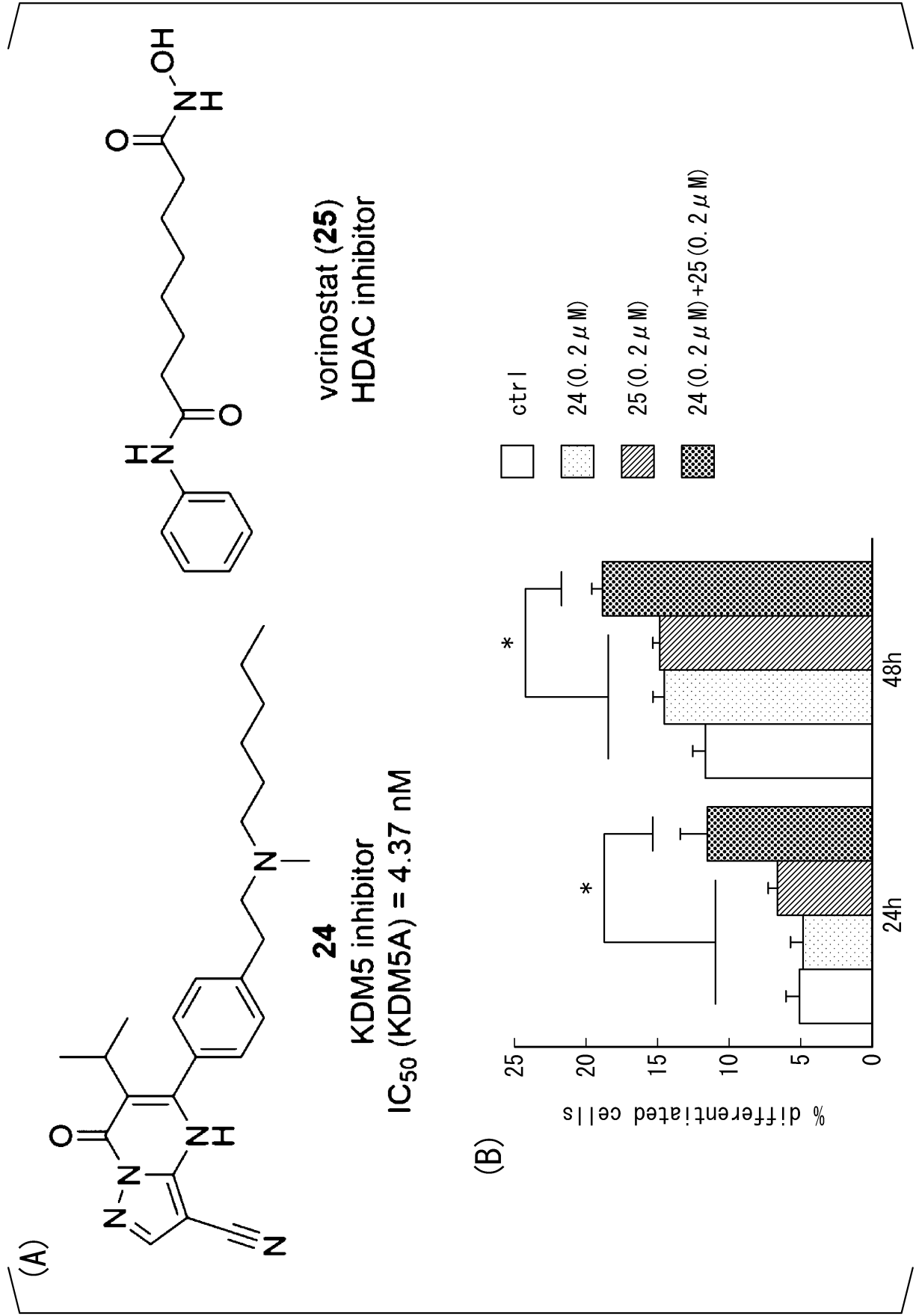


FIG. 20

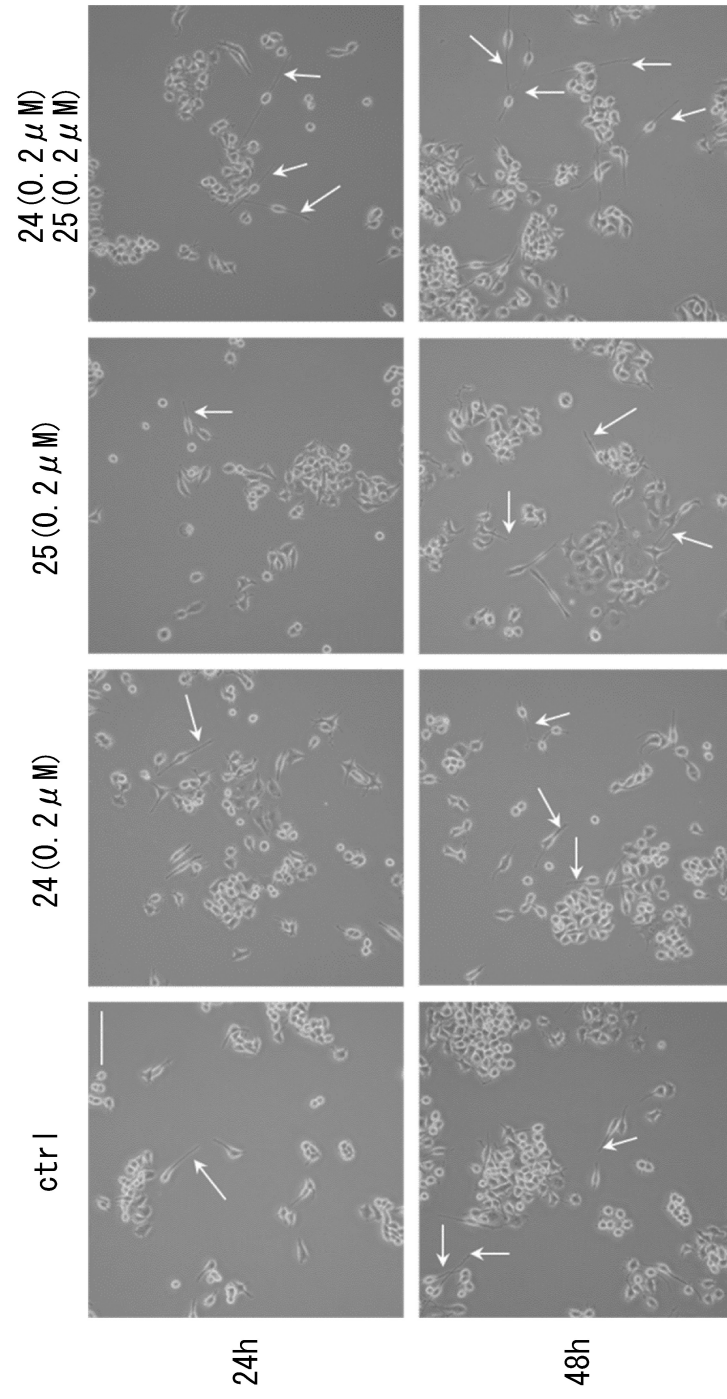


FIG. 21

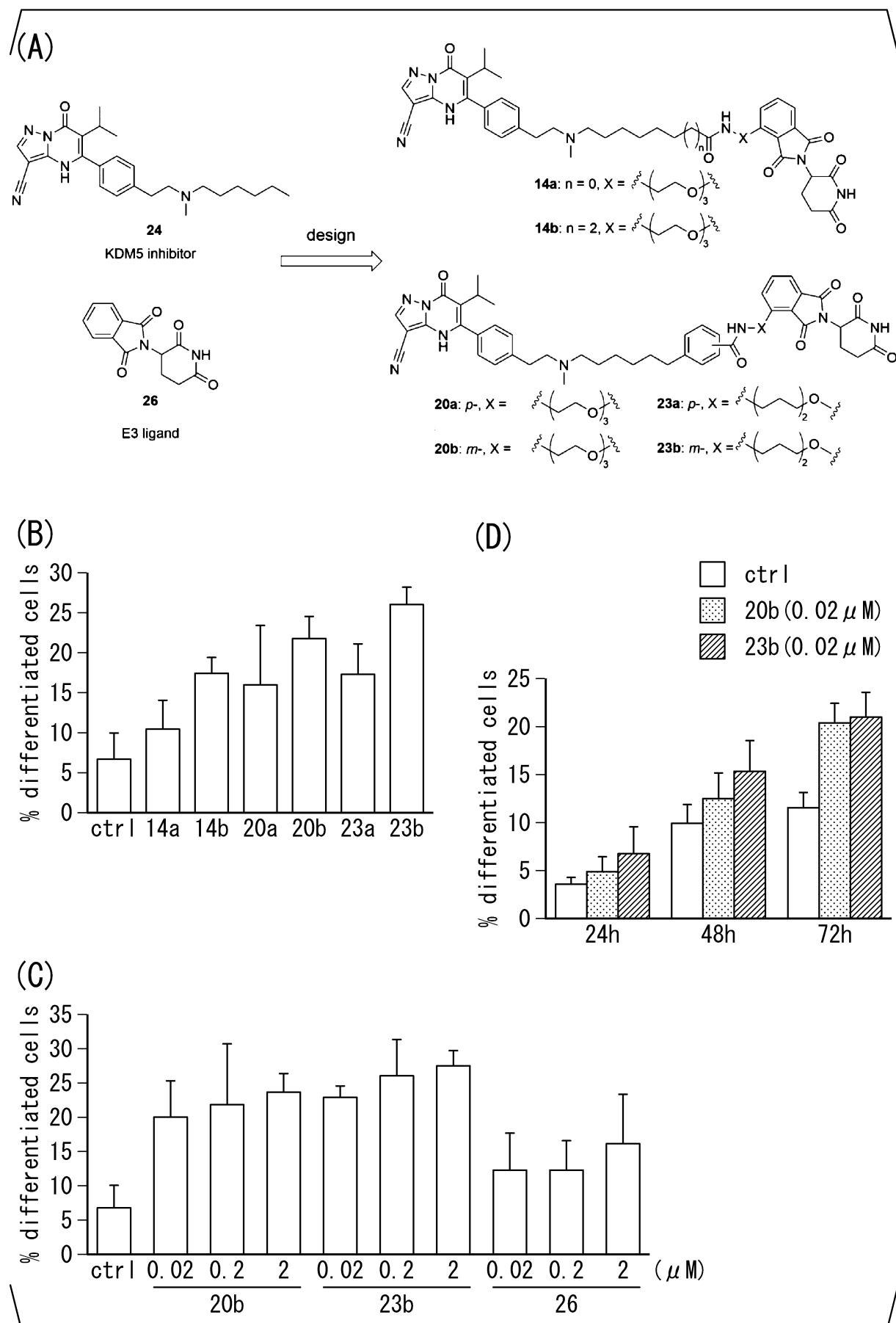


FIG. 22

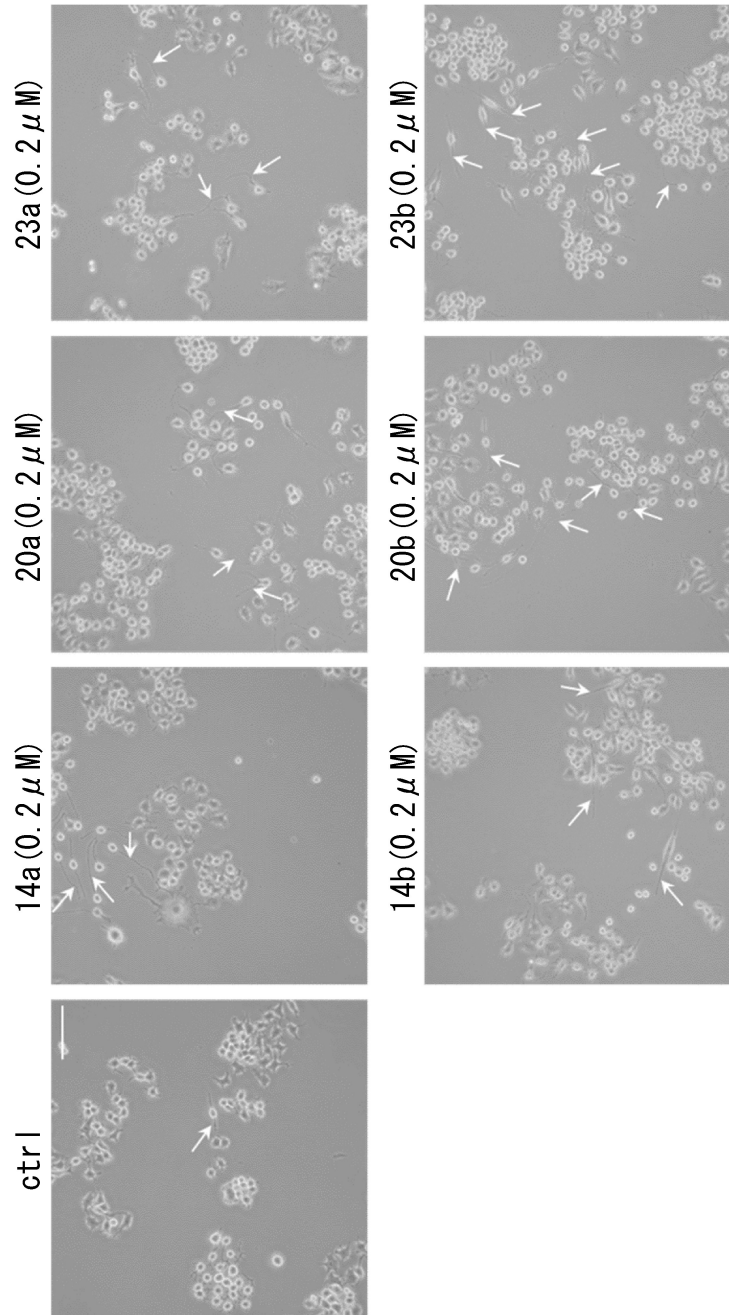


FIG. 23

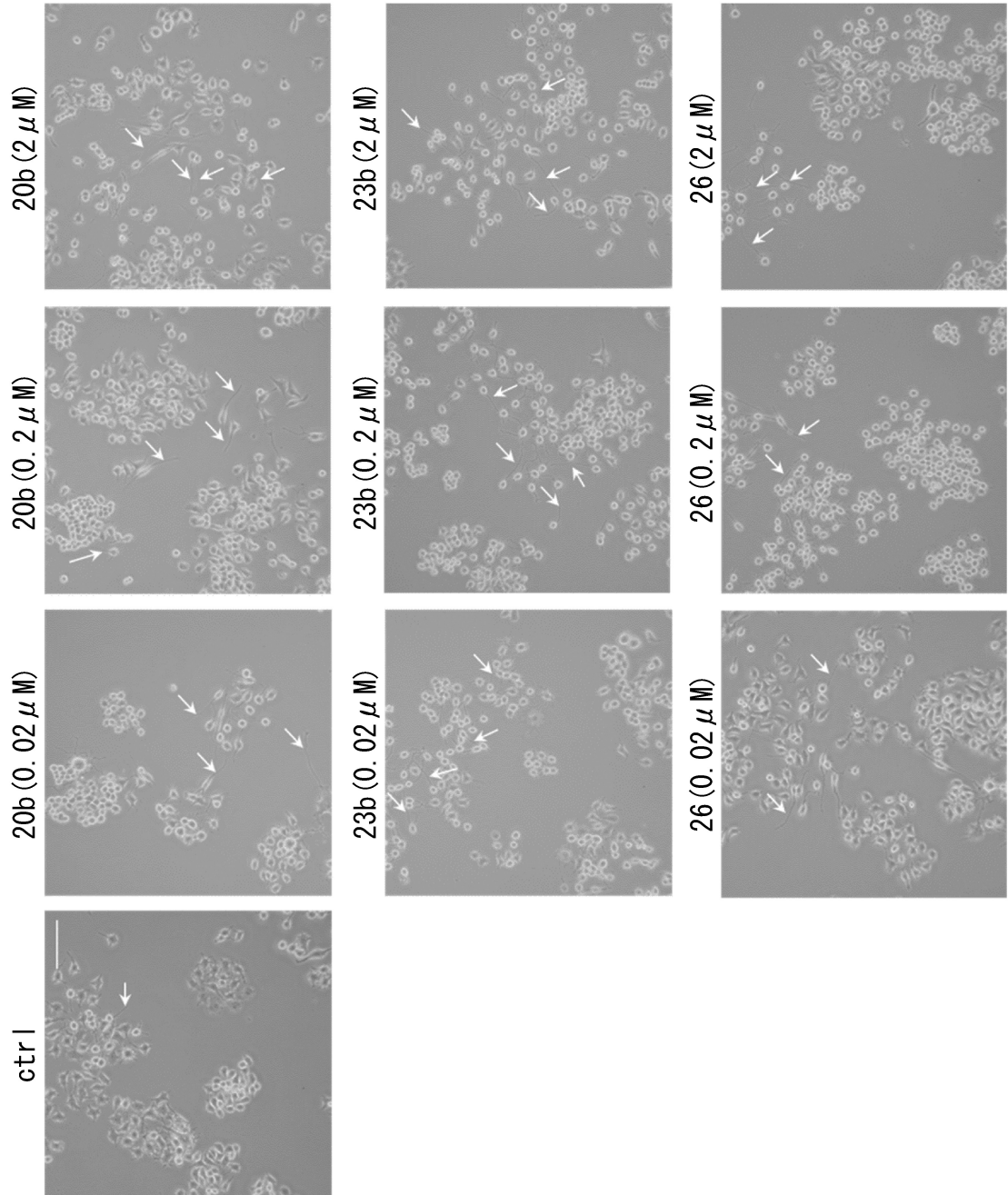


FIG. 24

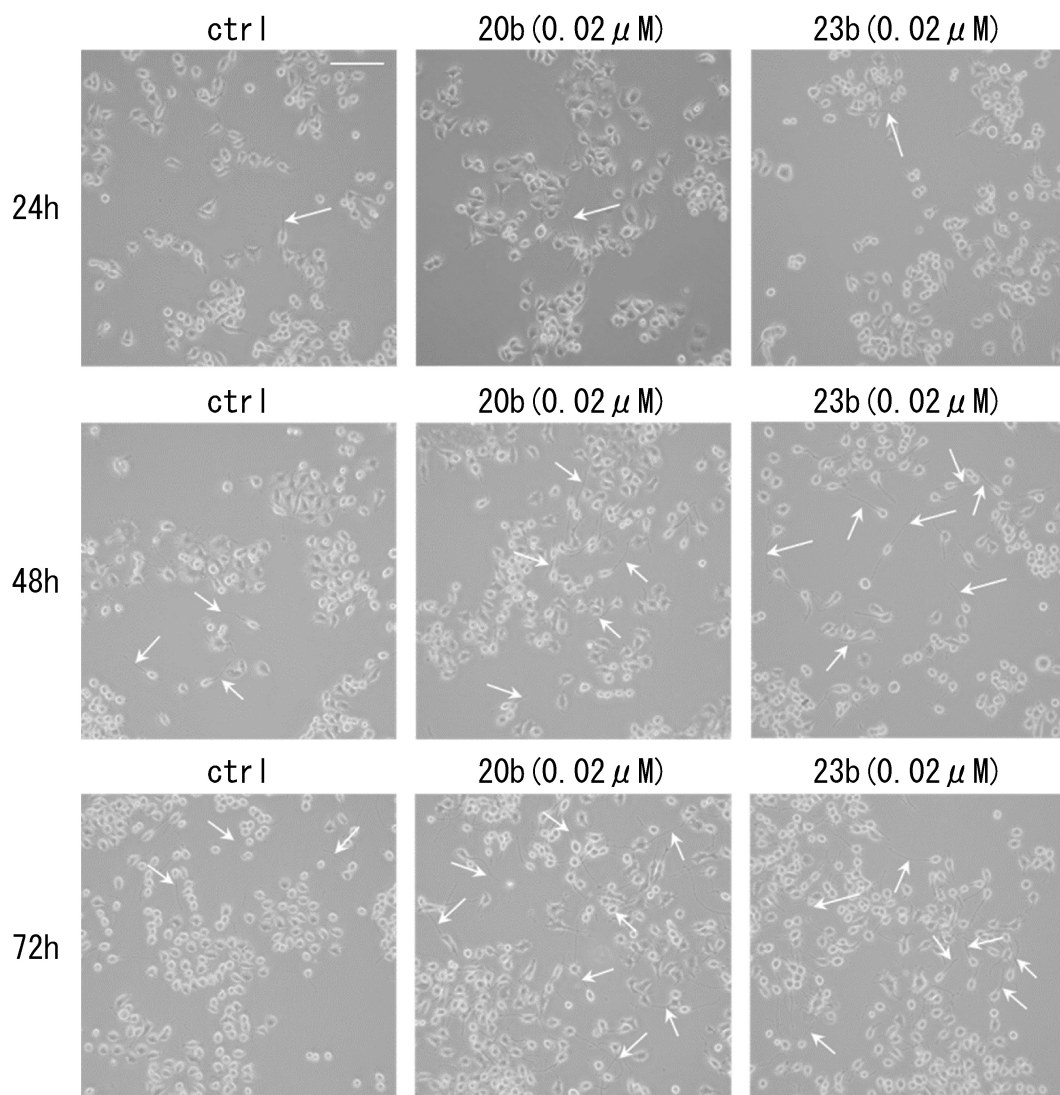


FIG. 25

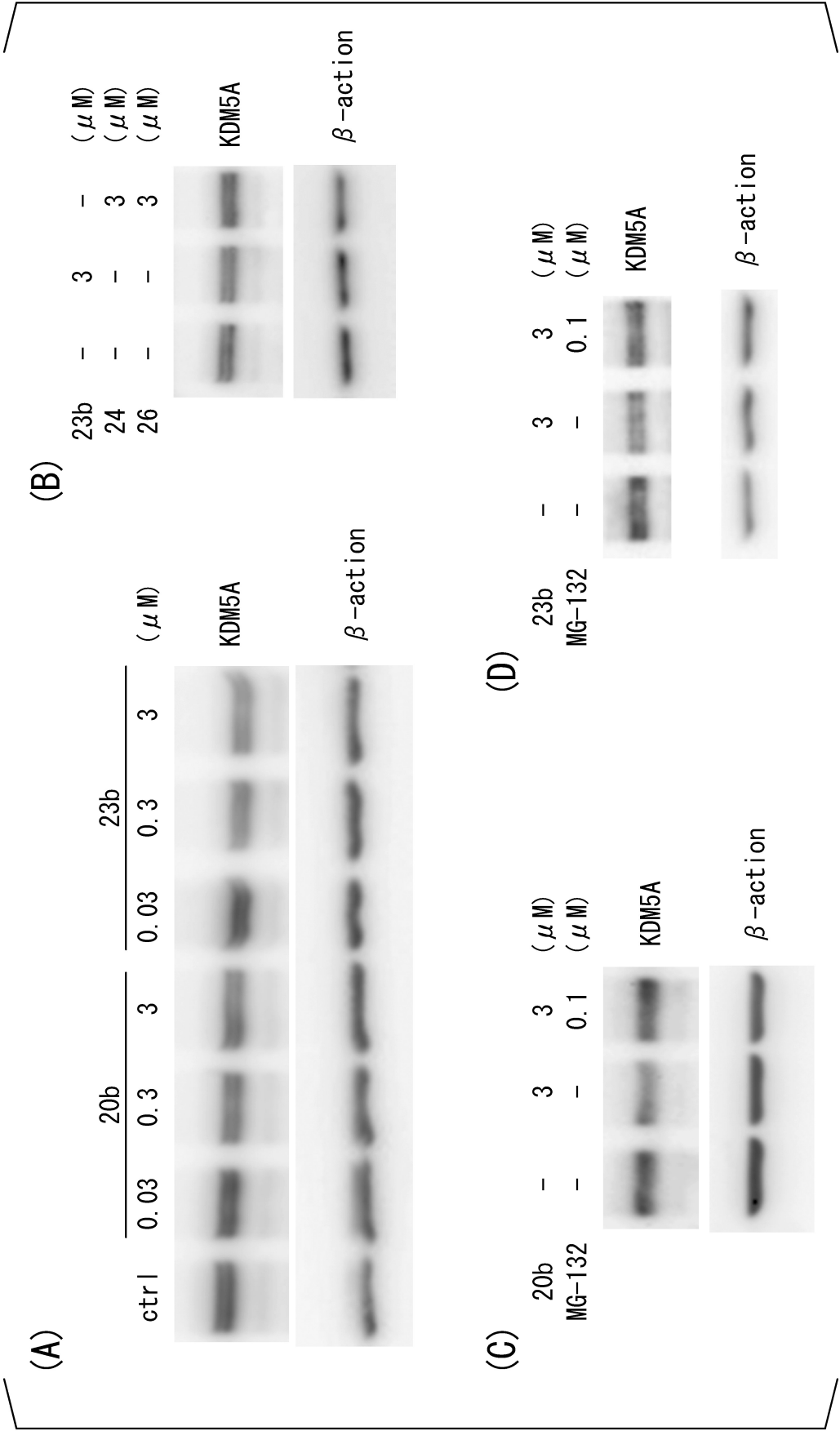


FIG. 26

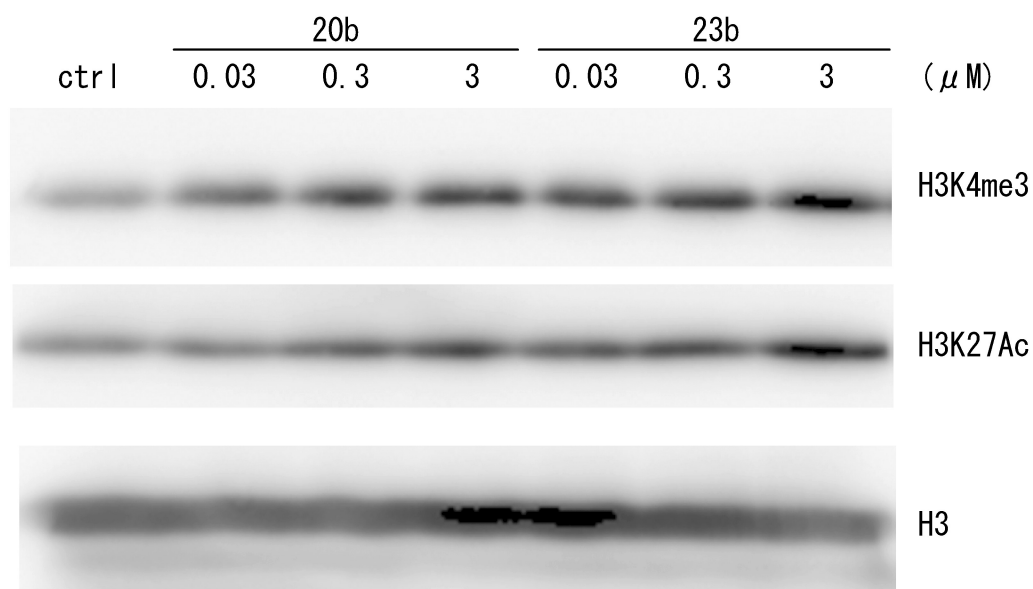


FIG. 27

compound	IC ₅₀ (KDM5A)	IC ₅₀ (HDAC1)
20b	0.289 ± 0.054 μ M	>100 μ M
23b	0.502 ± 0.056 μ M	>100 μ M