Figures

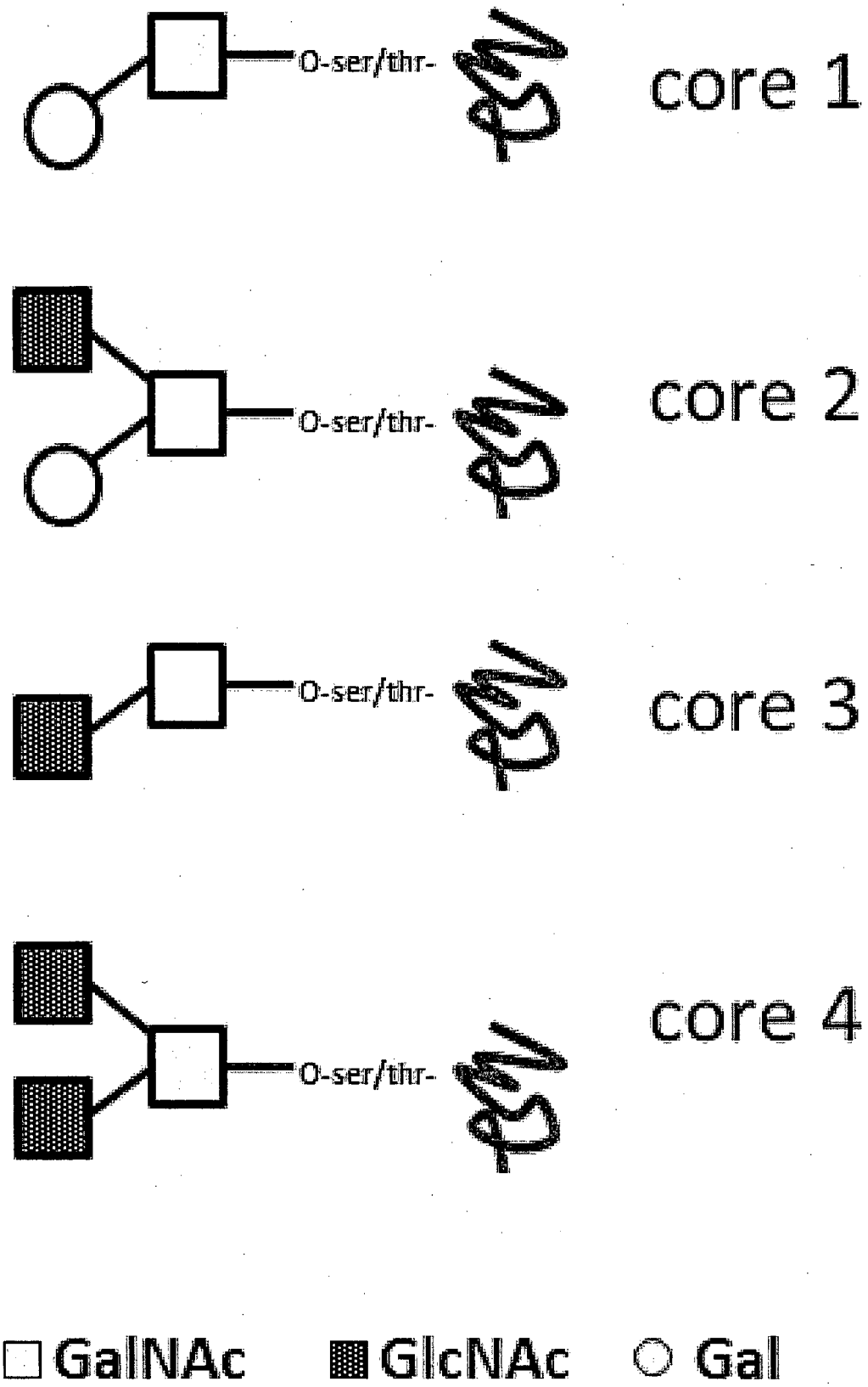


Figure 1

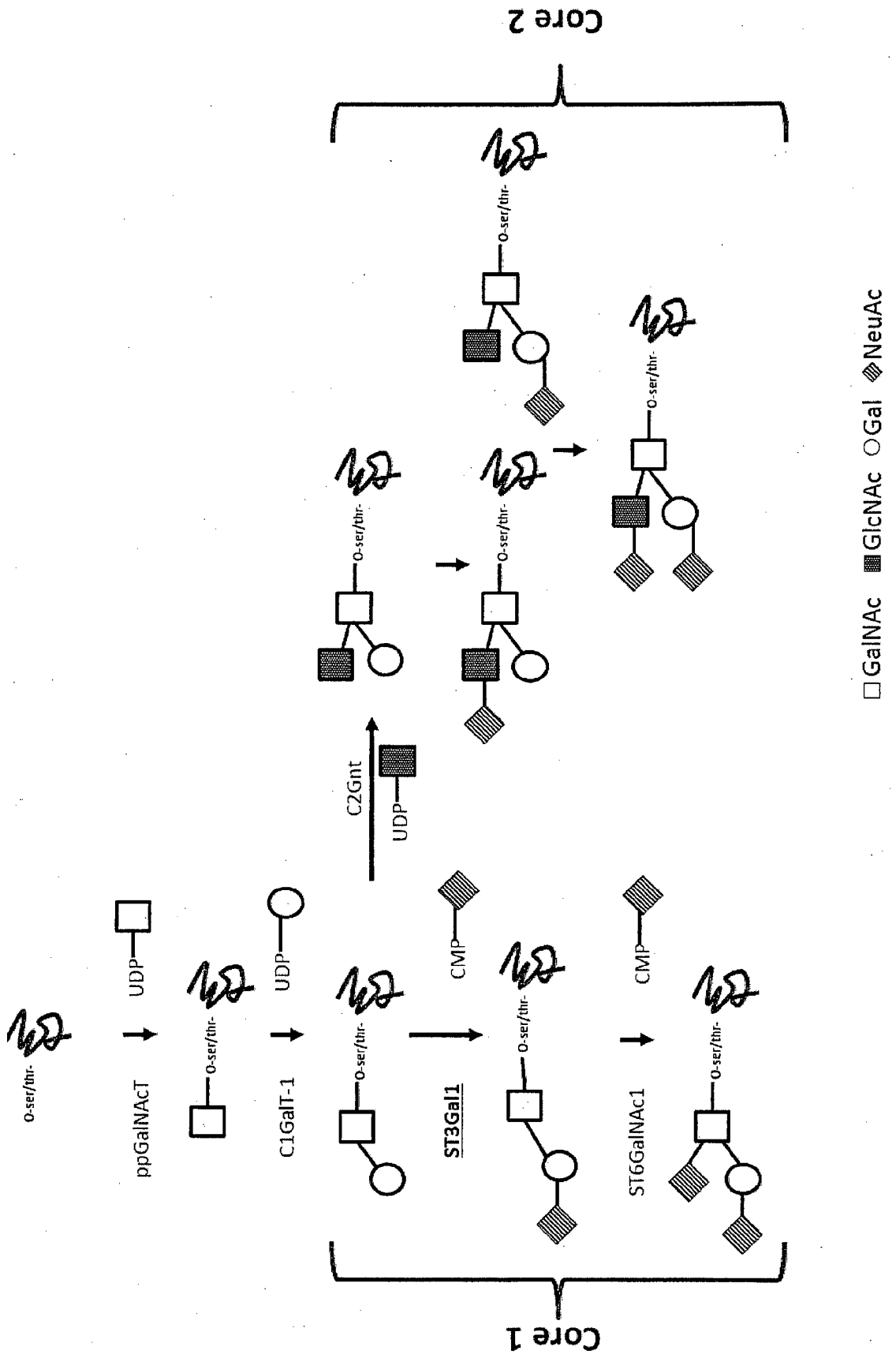

Core 2
Core 1
O-ser/thr-
UDP
ppGalNAcT
C1GalT-1
C2Gnt
CMP
ST3Gal1
ST6GalNAc1
GalNAc
GlcNAc
Gal
NeuAc

Figure 2

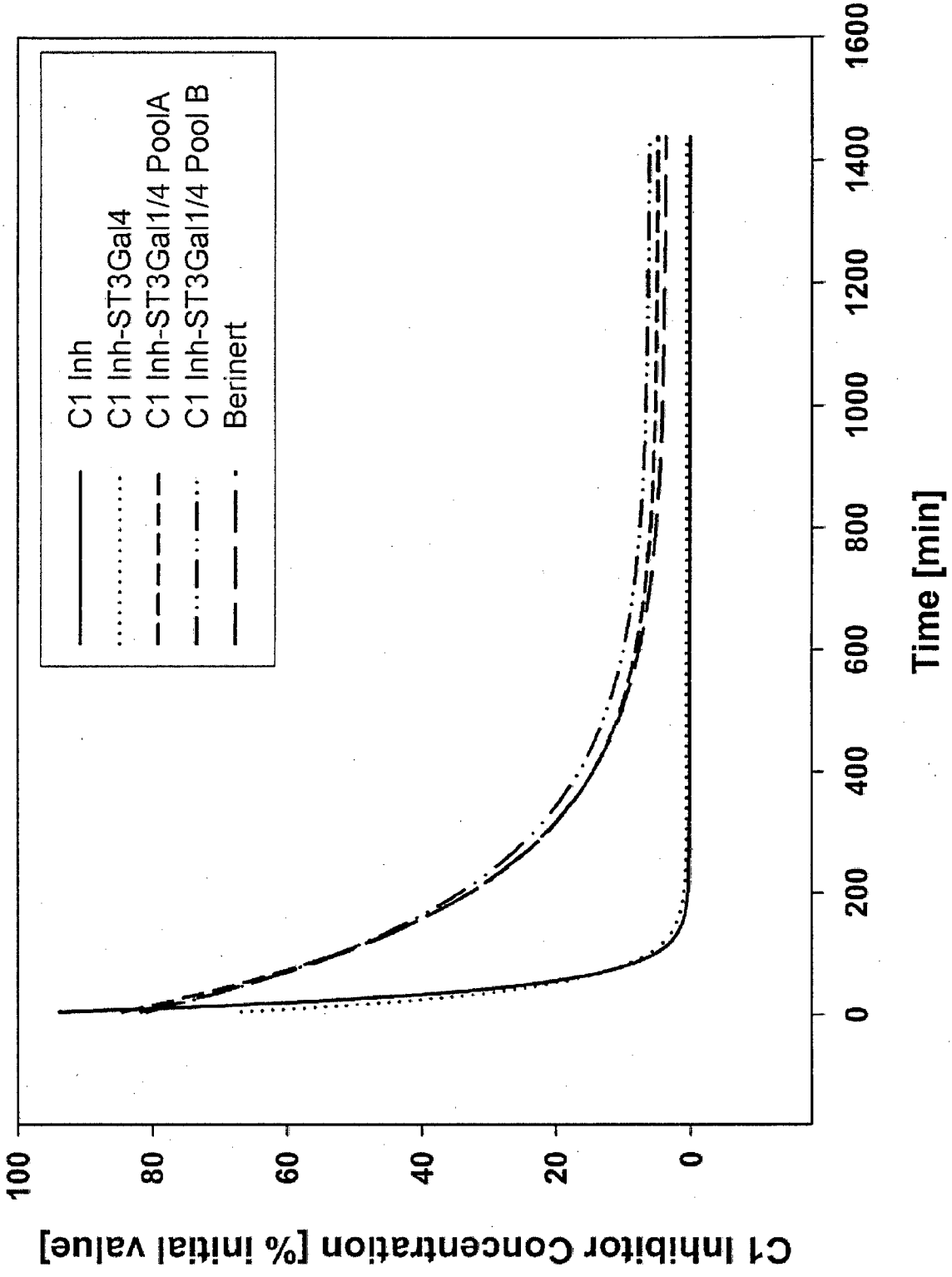

C1 Inhibitor Concentration [% initial value]
100
80
60
40
20
0
Time [min]
0
200
400
600
800
1000
1200
1400
1600
C1 Inh
C1 Inh-ST3Gal4
C1 Inh-ST3Gal1/4 PoolA
C1 Inh-ST3Gal1/4 Pool B
Berinert

Figure 3

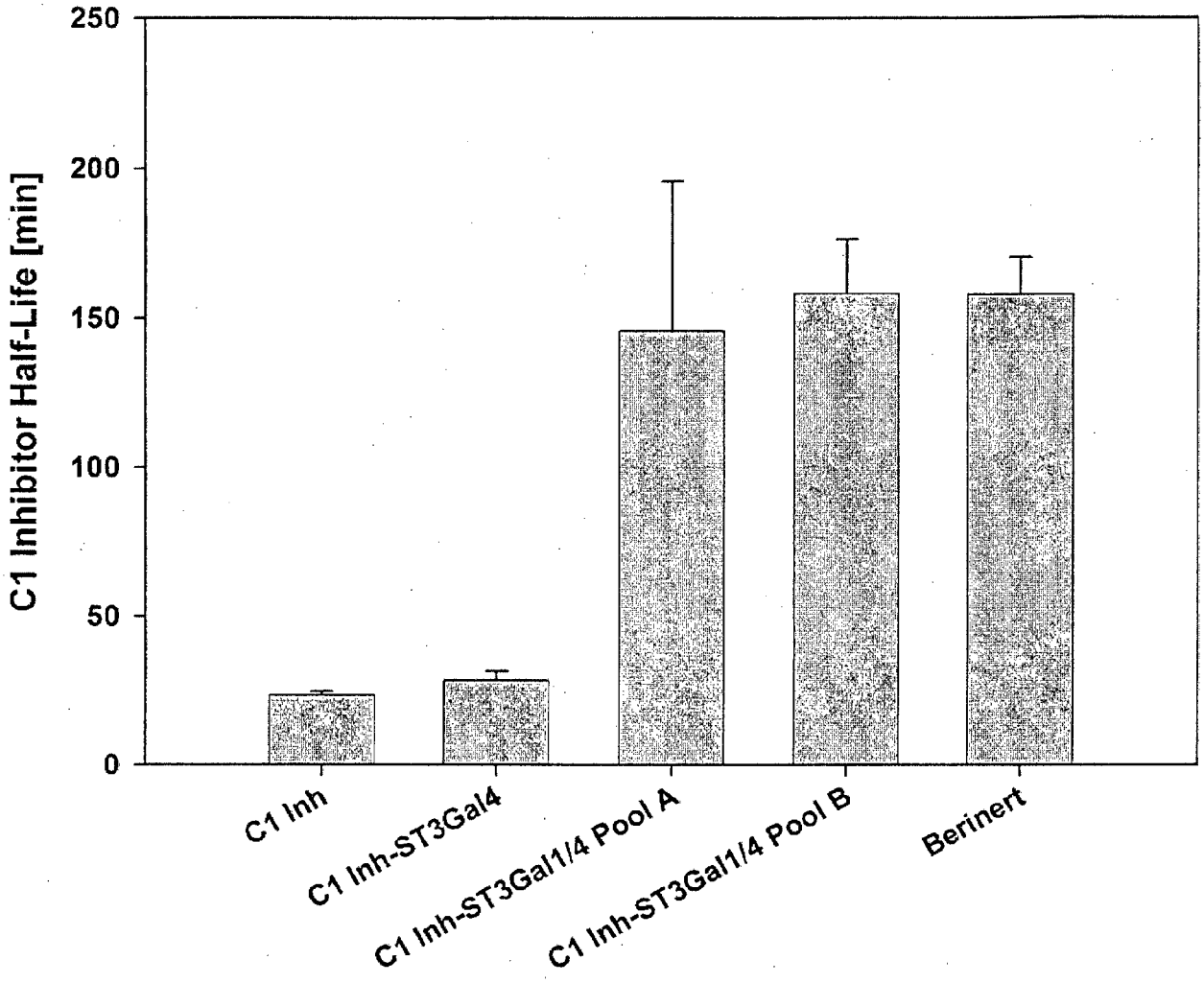

C1 Inhibitor Half-Life [min]
250
200
150
100
50
0
C1 Inh
C1 Inh-ST3Gal4
C1 Inh-ST3Gal1/4 Pool A
C1 Inh-ST3Gal1/4 Pool B
Berinert

Figure 4

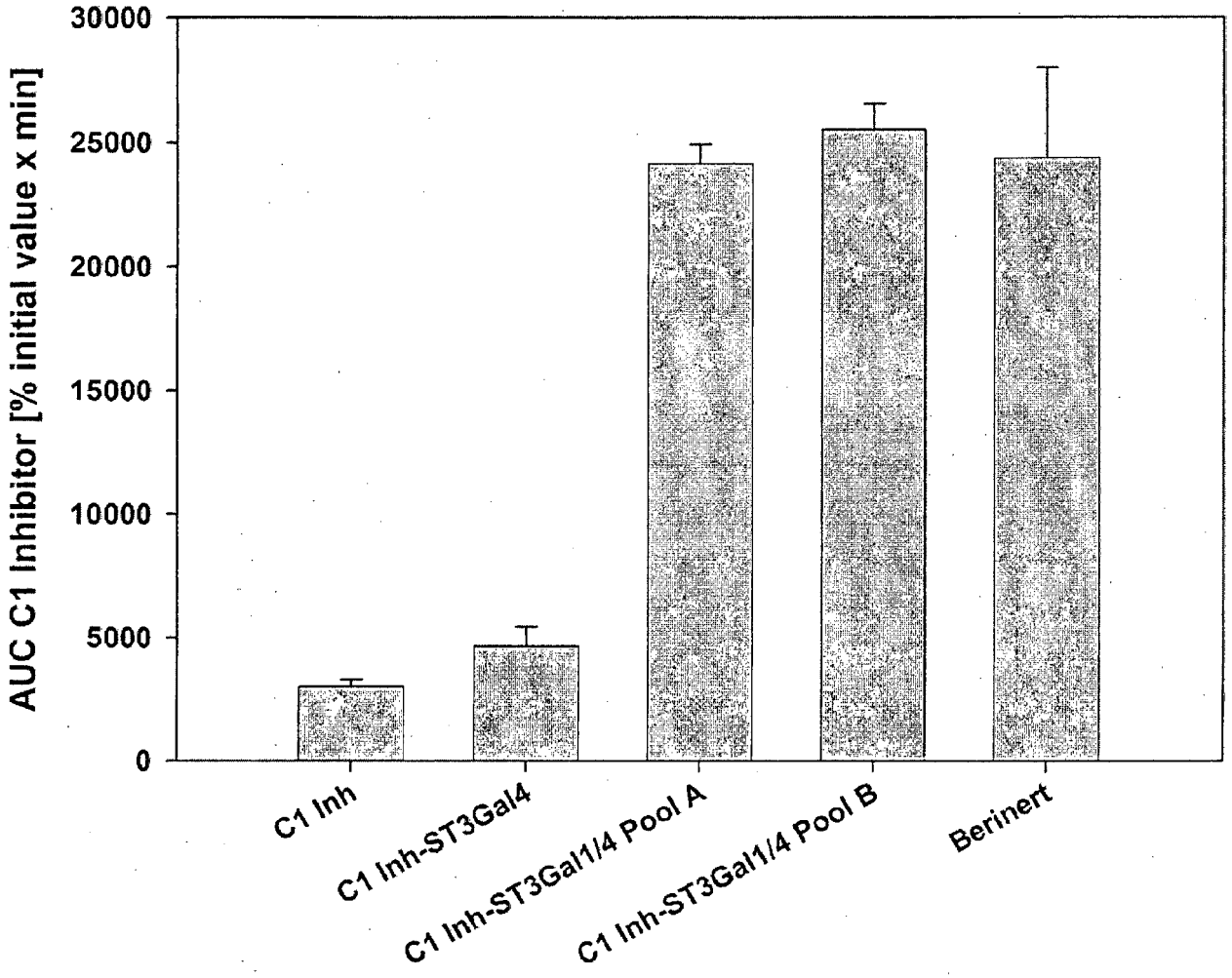

AUC C1 Inhibitor [% initial value x min]
30000
25000
20000
15000
10000
5000
0
C1 Inh
C1 Inh-ST3Gal4
C1 Inh-ST3Gal1/4 Pool A
C1 Inh-ST3Gal1/4 Pool B
Berinert

Figure 5

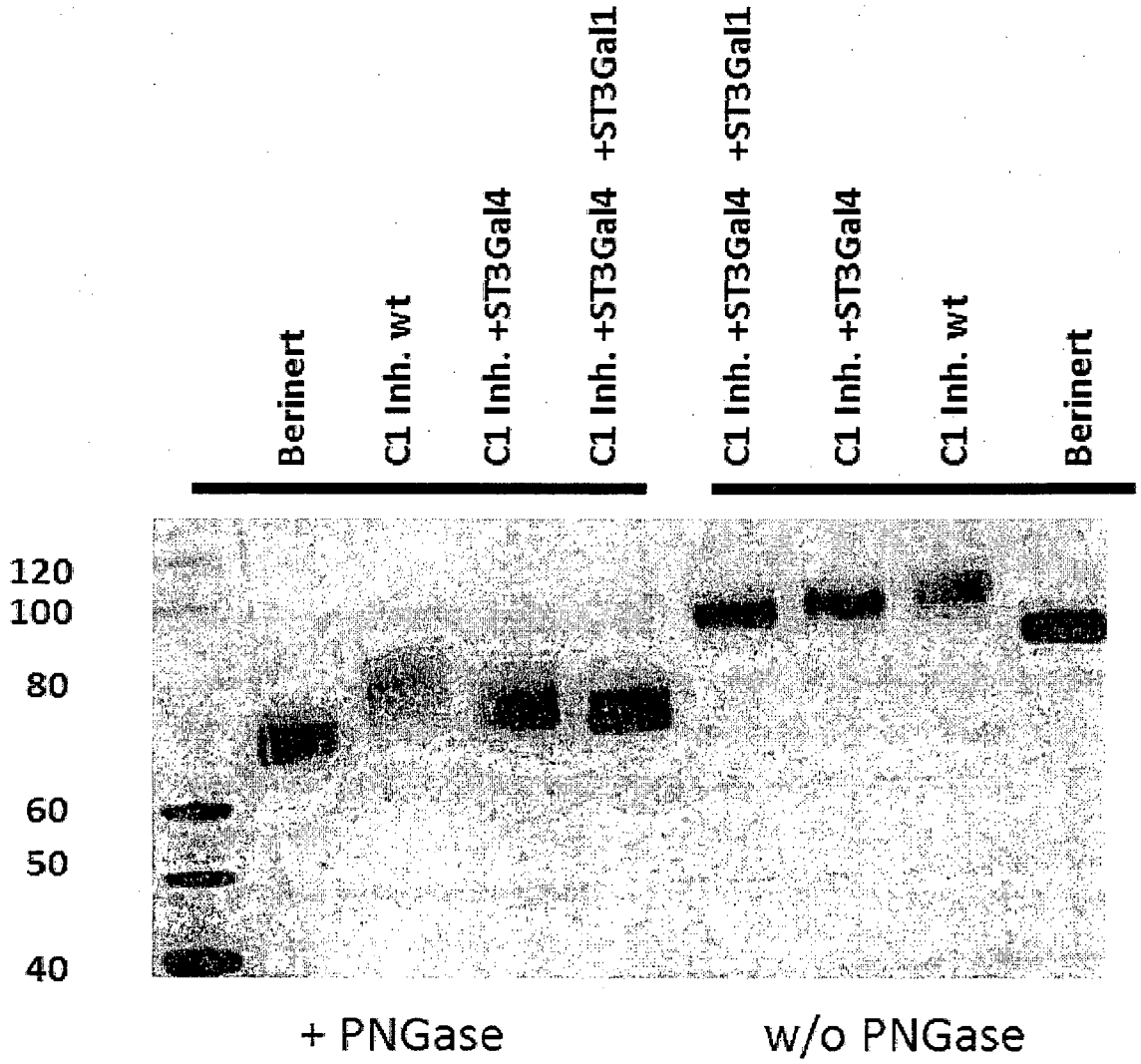

Berinert
C1 Inh. wt
C1 Inh. +ST3Gal4
C1 Inh. +ST3Gal4 +ST3Gal1
C1 Inh. +ST3Gal4 +ST3Gal1
C1 Inh. +ST3Gal4
C1 Inh. wt
Berinert
120
100
80
60
50
40
+ PNGase
w/o PNGase

Figure 6

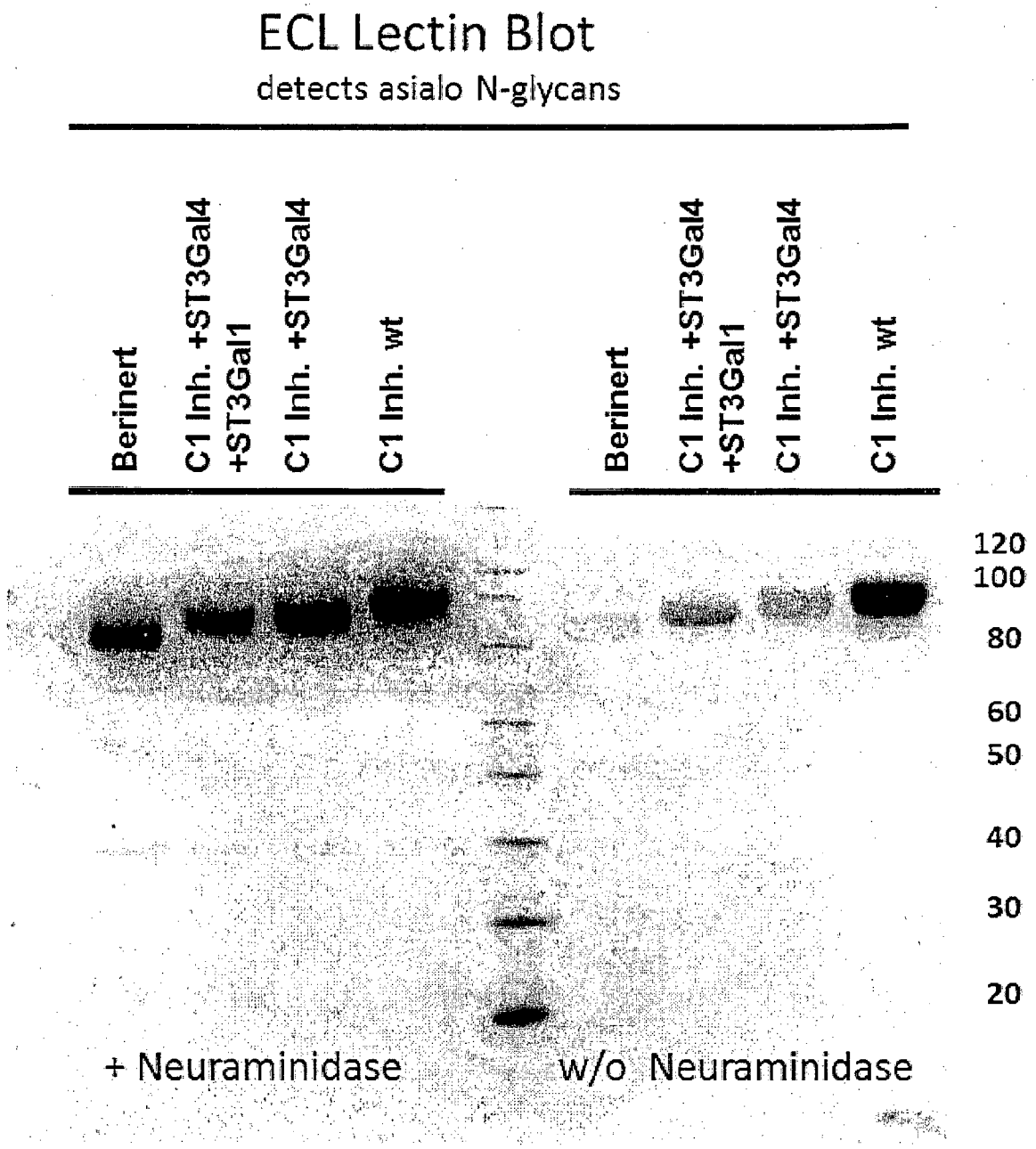

ECL Lectin Blot
detects asialo N-glycans
Berinert
C1 Inh. +ST3Gal4 +ST3Gal1
C1 Inh. +ST3Gal4
C1 Inh. wt
Berinert
C1 Inh. +ST3Gal4 +ST3Gal1
C1 Inh. +ST3Gal4
C1 Inh. wt
120
100
80
60
50
40
30
20
+ Neuraminidase
w/o Neuraminidase

Figure 7

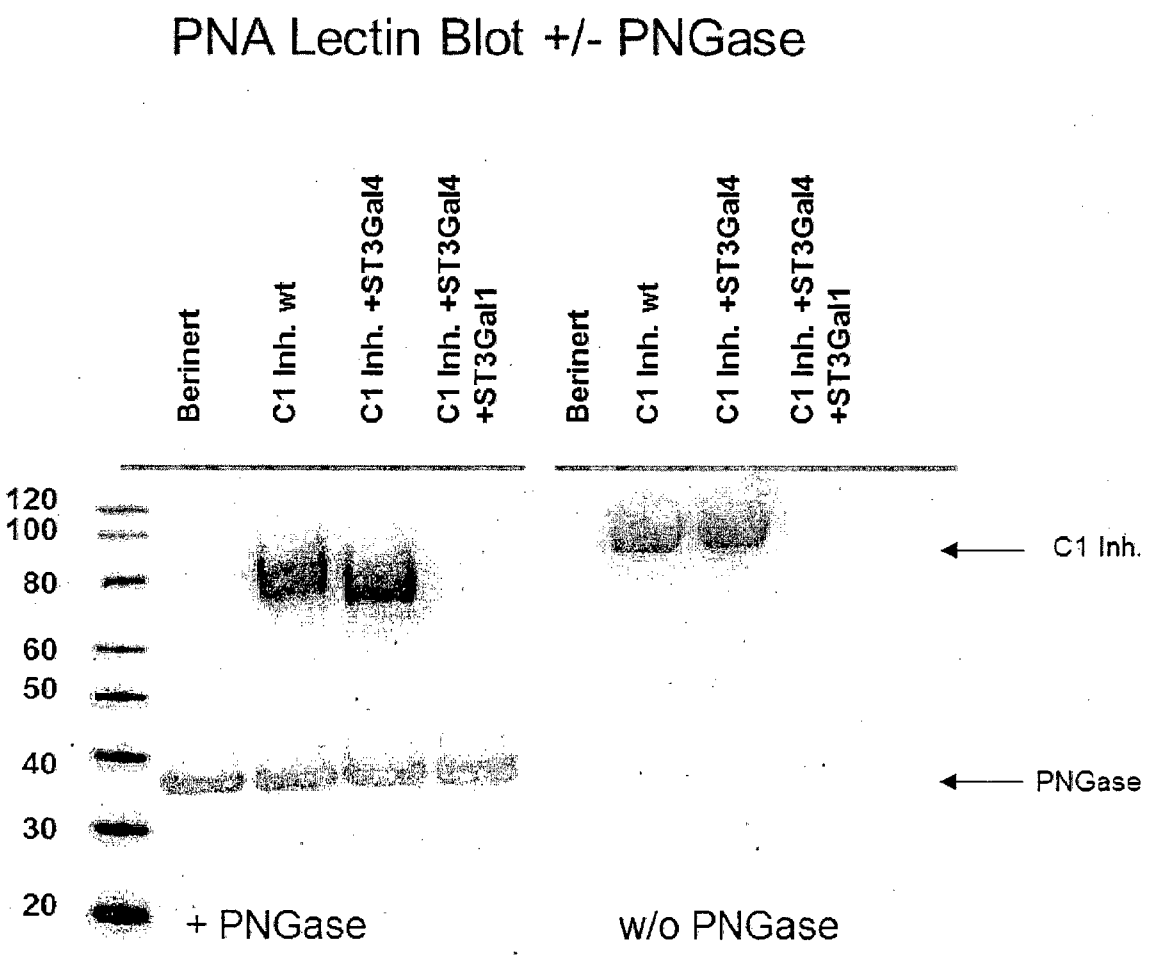

PNA Lectin Blot +/- PNGase
Berinert
C1 Inh. wt
C1 Inh. +ST3Gal4
C1 Inh. +ST3Gal4 +ST3Gal1
Berinert
C1 Inh. wt
C1 Inh. +ST3Gal4
C1 Inh. +ST3Gal4 +ST3Gal1
120
100
80
60
50
40
30
20
C1 Inh.
PNGase
+ PNGase
w/o PNGase

Figure 8

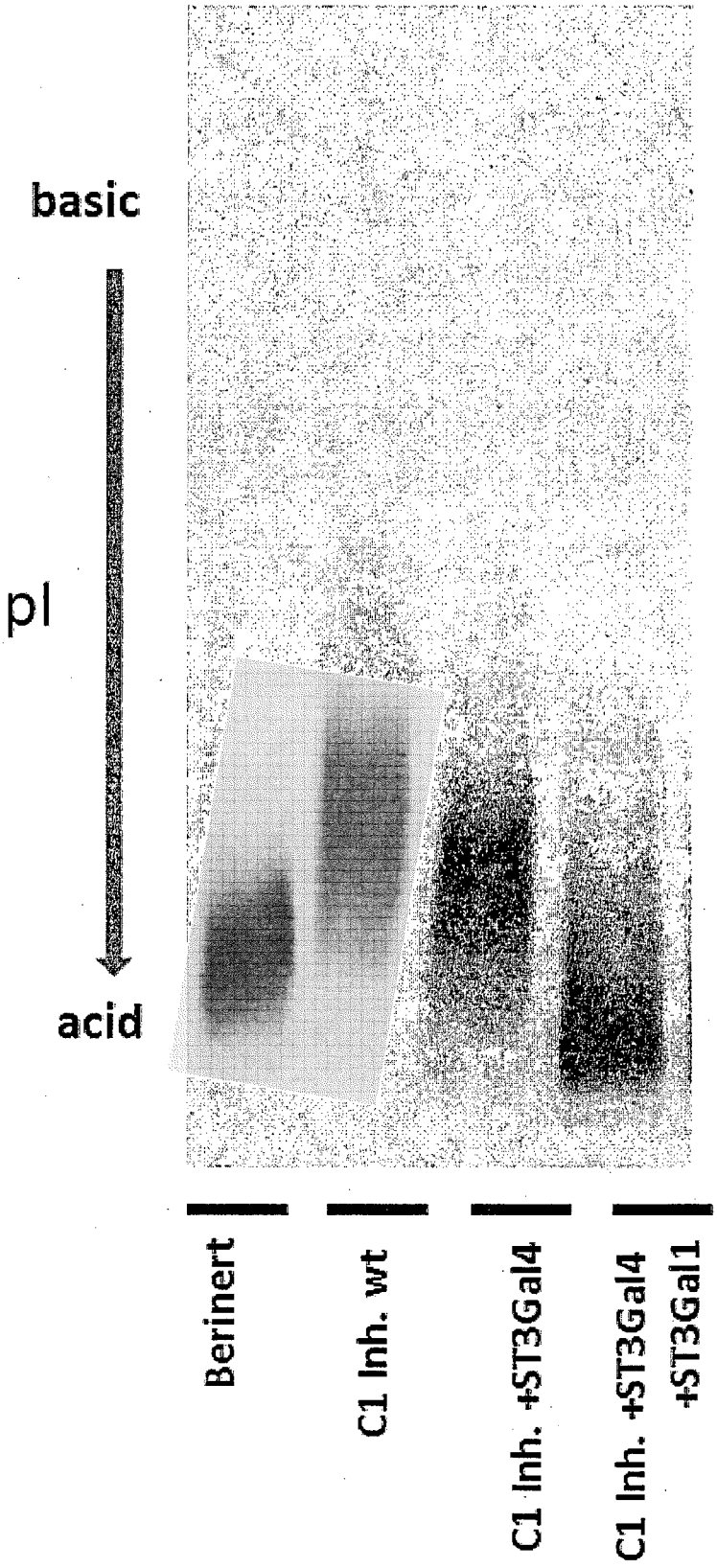

basic
pI
acid
Berinert
C1 Inh. wt
C1 Inh. +ST3Gal4
C1 Inh. +ST3Gal4
+ST3Gal1

Figure 9

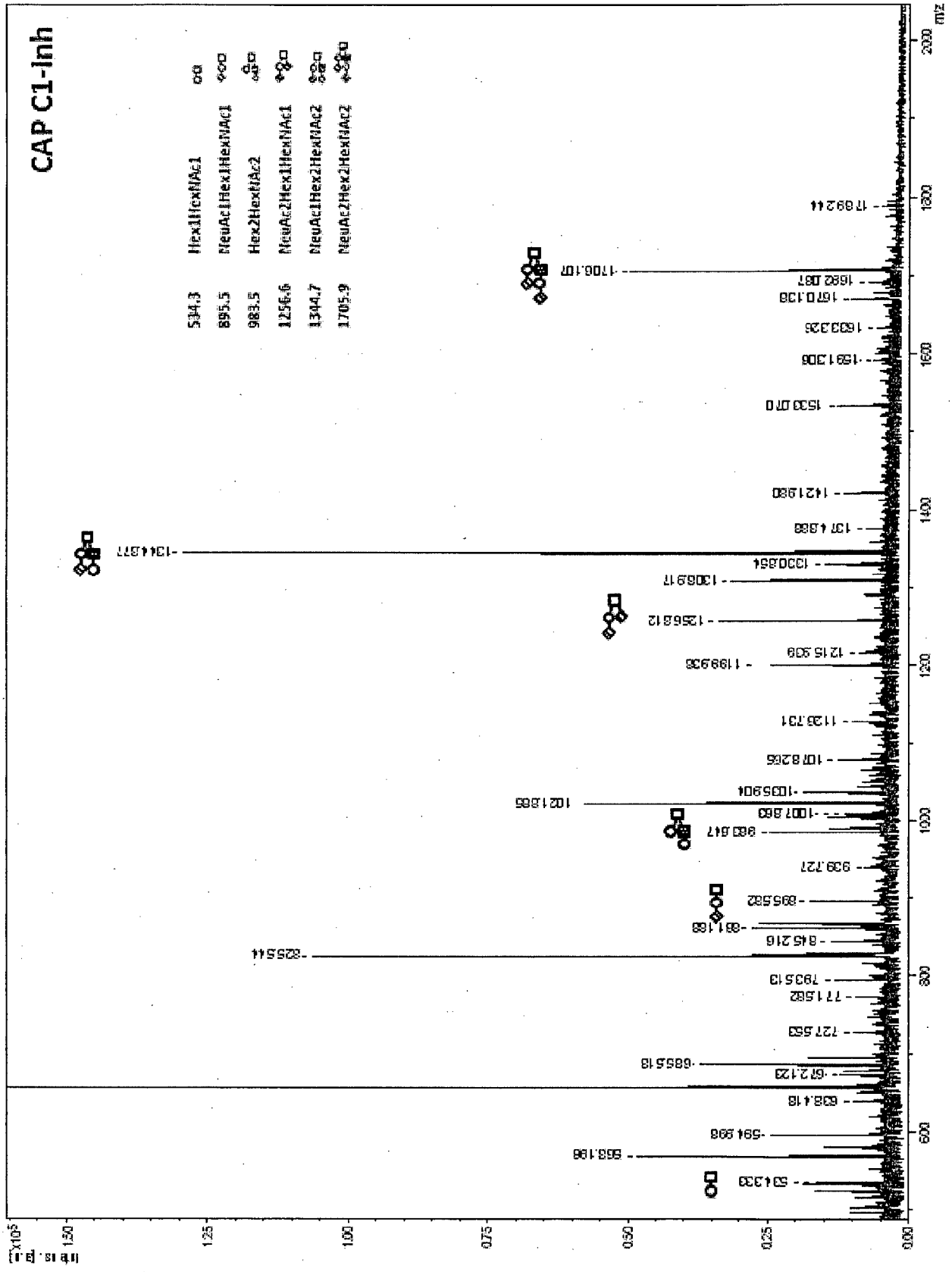

CAP C1-Inh
534.3 Hex1HexNAc1
895.5 NeuAc1Hex1HexNAc1
983.5 Hex2HexNAc2
1256.6 NeuAc2Hex1HexNAc1
1344.7 NeuAc1Hex2HexNAc2
1705.9 NeuAc2Hex2HexNAc2
m/z
Intens. [a.u.]

Figure 10 A

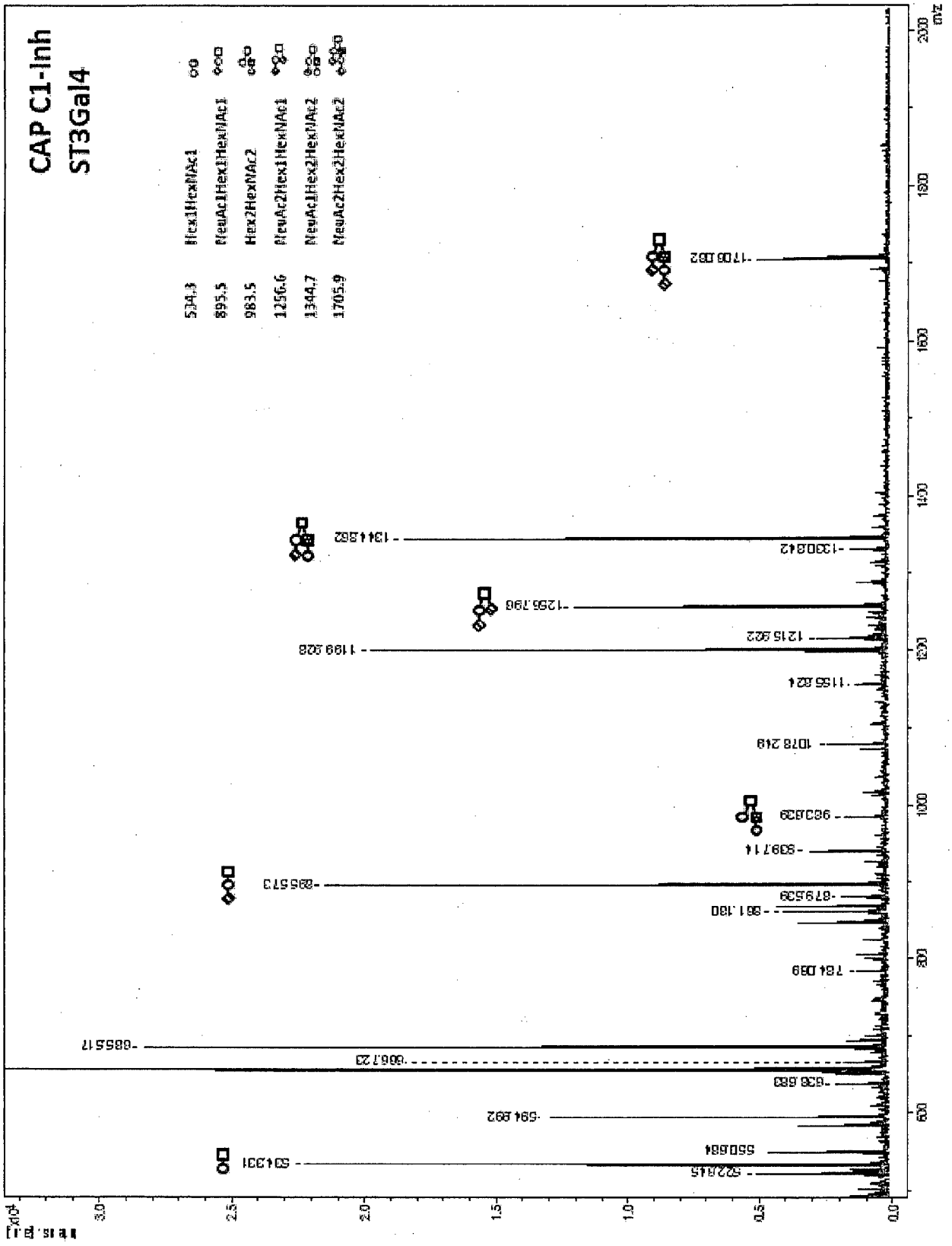

CAP C1-Inh
ST3Gal4
534.3 Hex1HexNAc1
895.5 NeuAc1Hex1HexNAc1
983.5 Hex2HexNAc2
1256.6 NeuAc2Hex1HexNAc1
1344.7 NeuAc1Hex2HexNAc2
1705.9 NeuAc2Hex2HexNAc2
1706.082
1344.582
1330.842
1256.798
1215.822
1199.828
1155.824
1078.219
980.829
839.714
895.513
879.539
861.180
784.089
685.517
666.723
636.660
594.892
550.684
522.645
504.331
m/z
x10^4
Intensity

Figure 10 B

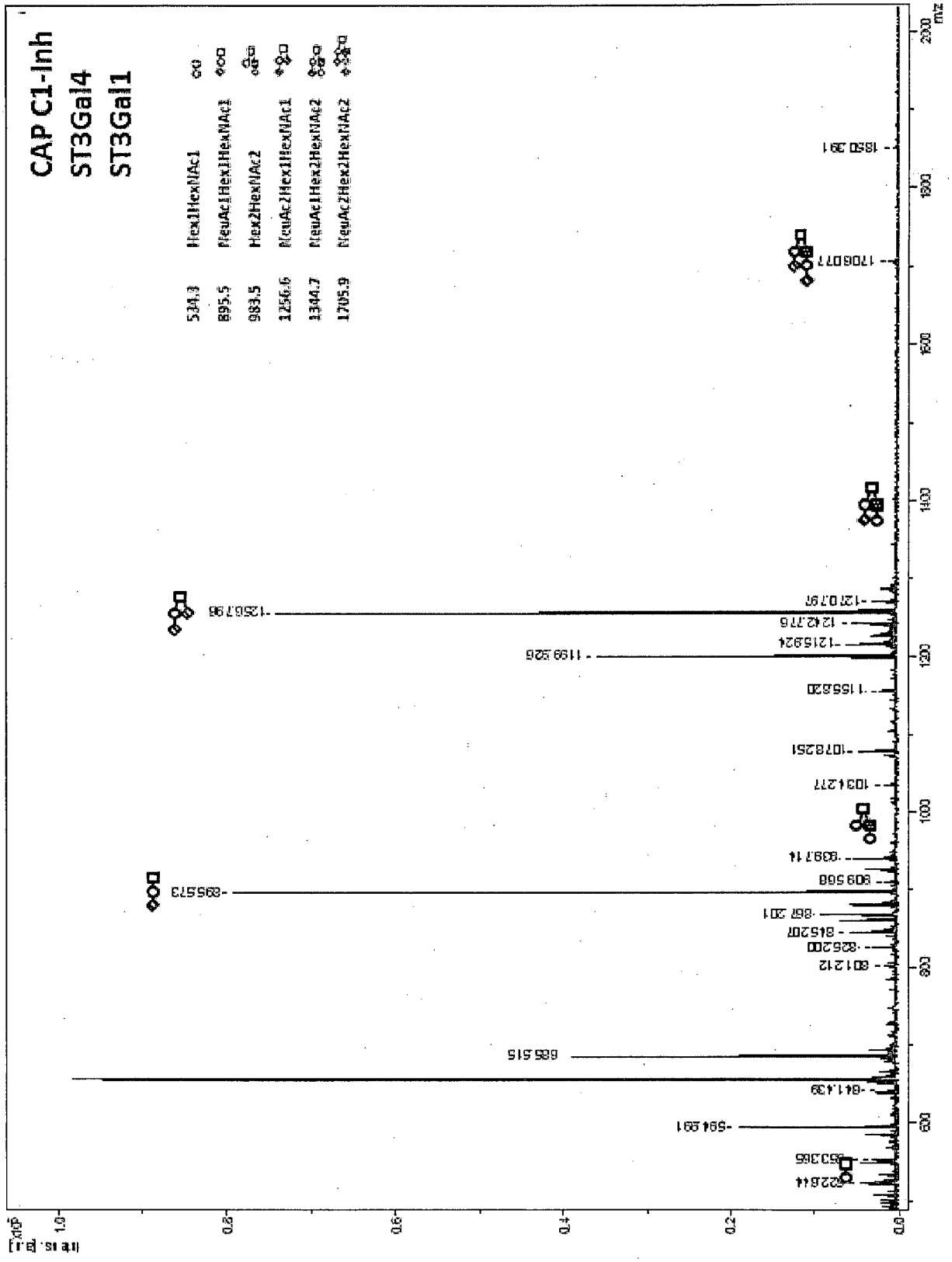

CAP C1-Inh
ST3Gal4
ST3Gal1
534.3 Hex1HexNAc1
895.5 NeuAc1Hex1HexNAc1
983.5 Hex2HexNAc2
1256.6 NeuAc1Hex1HexNAc1
1344.7 NeuAc1Hex2HexNAc2
1705.9 NeuAc2Hex2HexNAc2
1850.391
1708.077
1256.796
1199.526
1155.520
1078.251
1031.277
809.714
809.568
895.573
868.301
815.207
826.200
801.212
665.515
641.439
594.991
630.365
622.614
Intensity [a.u.]
m/z

Figure 10 C

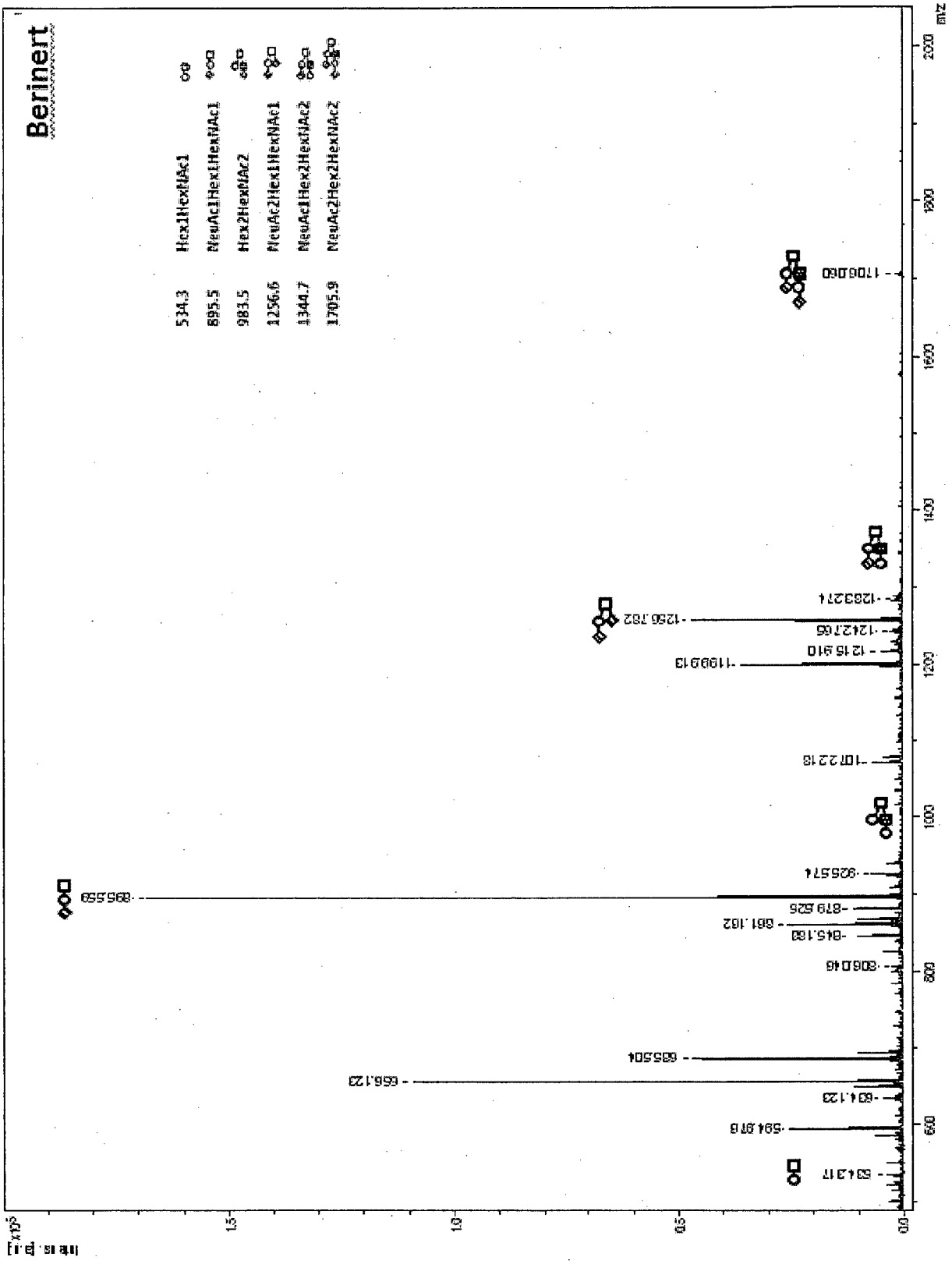

Berinert
534.3 Hex1HexNAc1
895.5 NeuAc1Hex1HexNAc1
983.5 Hex2HexNAc2
1256.6 NeuAc2Hex1HexNAc1
1344.7 NeuAc1Hex2HexNAc2
1705.9 NeuAc2Hex2HexNAc2
Intens. [a.u.]
mz

Figure 10 D

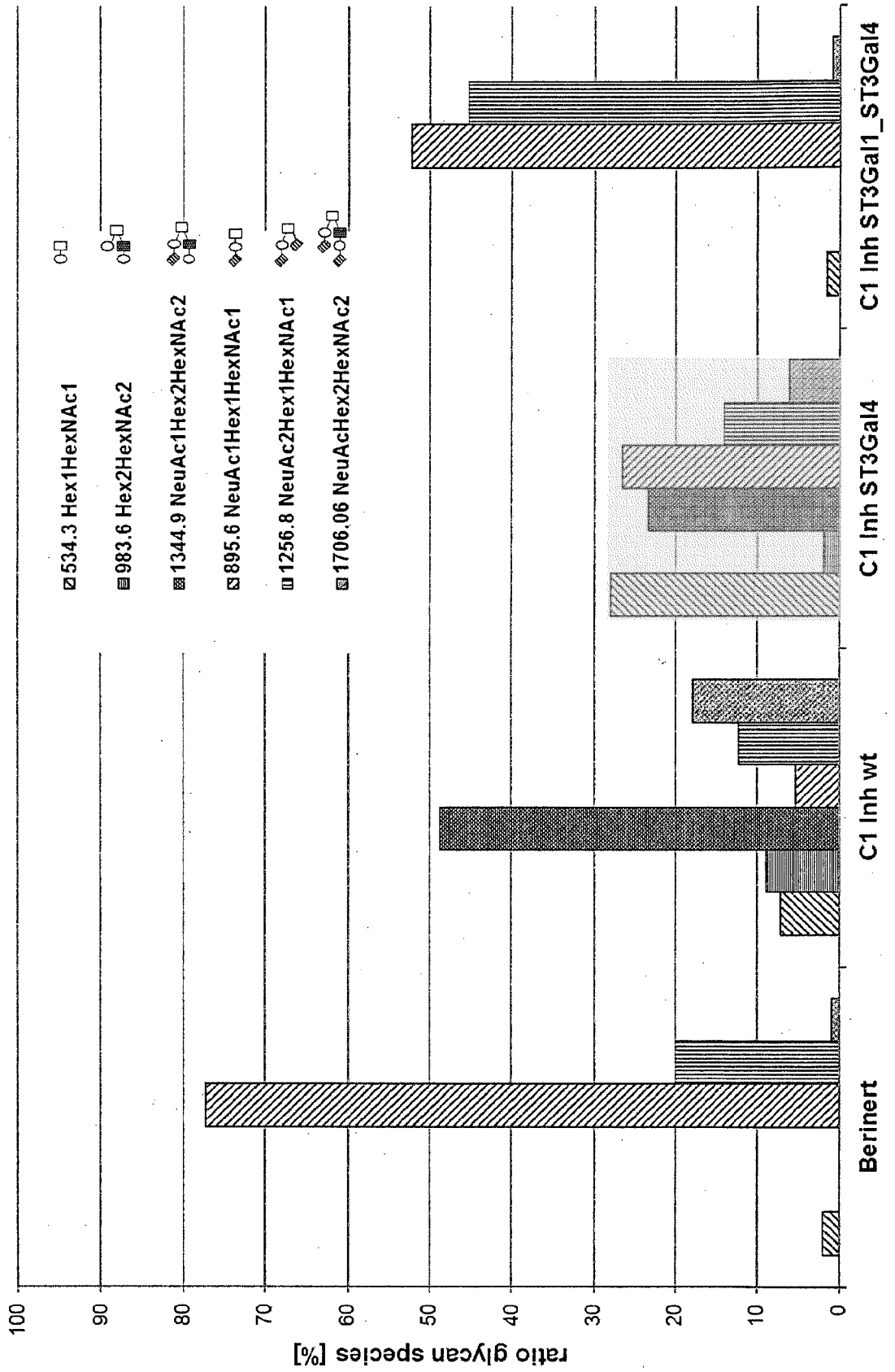

534.3 Hex1HexNAc1
983.6 Hex2HexNAc2
1344.9 NeuAc1Hex2HexNAc2
895.6 NeuAc1Hex1HexNAc1
1256.8 NeuAc2Hex1HexNAc1
1706.06 NeuAcHex2HexNAc2
ratio glycan species [%]
100
90
80
70
60
50
40
30
20
10
0
Berinert
C1 Inh wt
C1 Inh ST3Gal4
C1 Inh ST3Gal1_ST3Gal4

Figure 11

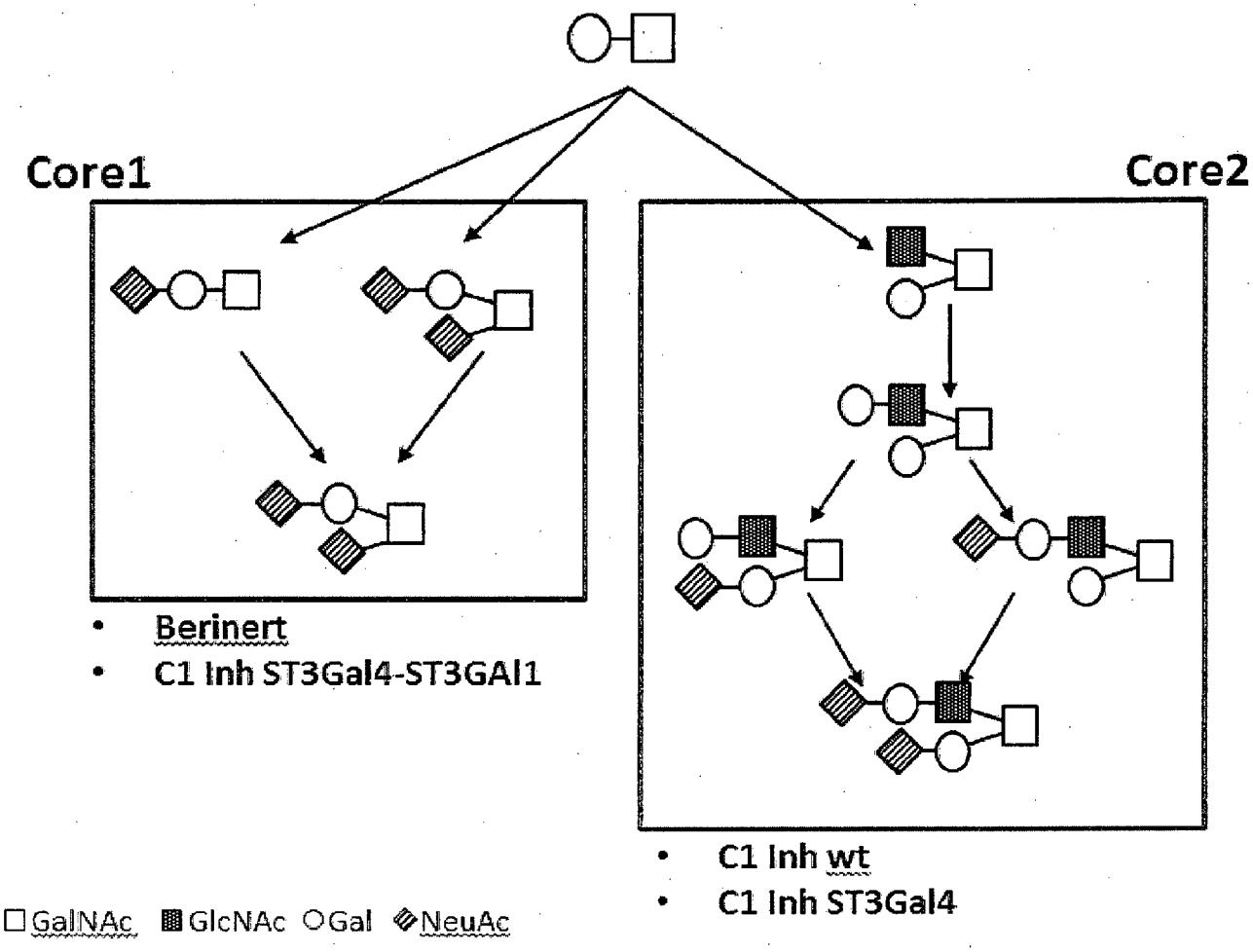

Core1
Core2
• Berinert
• C1 Inh ST3Gal4-ST3GAl1
• C1 Inh wt
• C1 Inh ST3Gal4
GalNAc GlcNAc Gal NeuAc

Figure 12

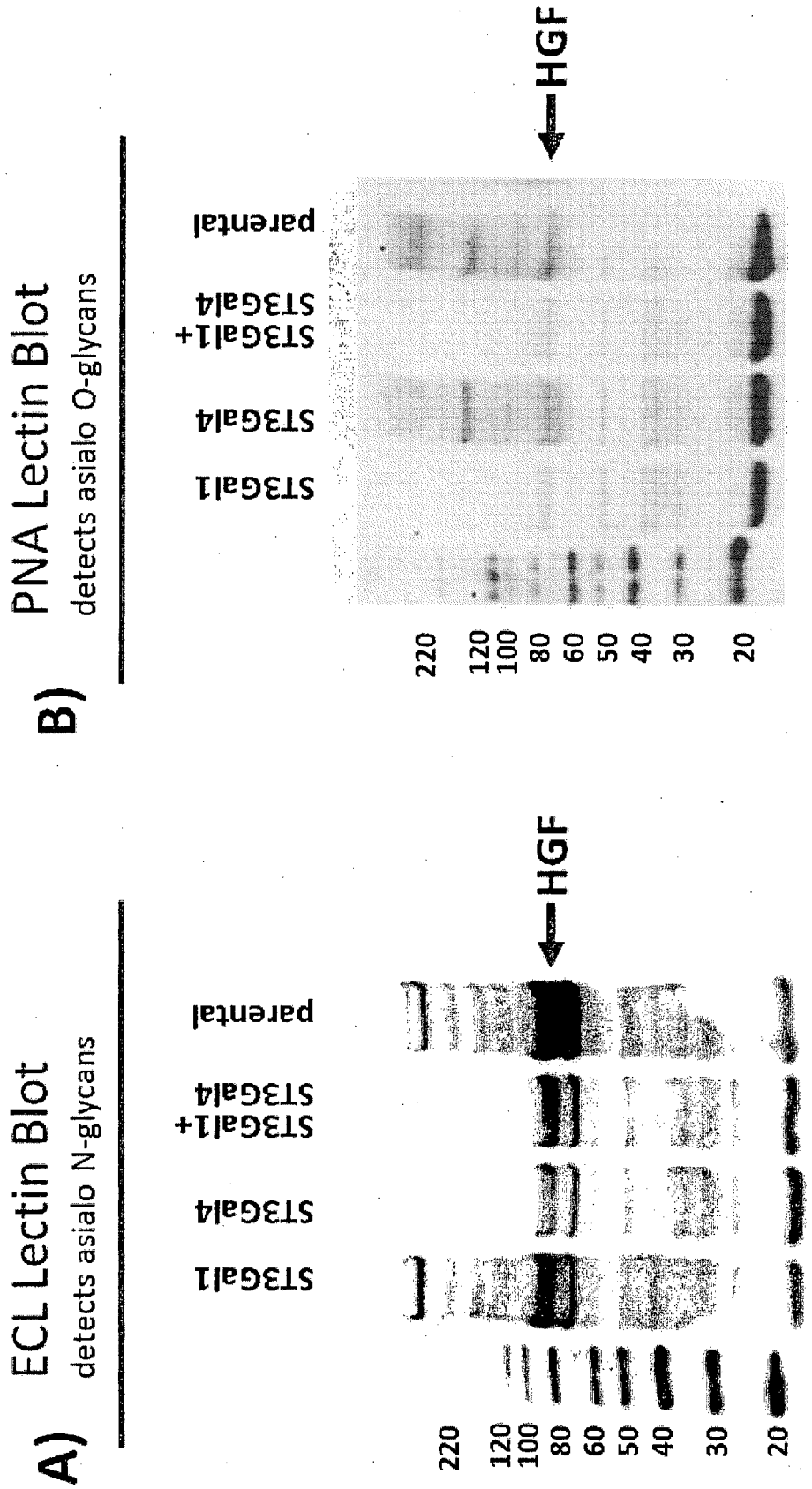

B)
PNA Lectin Blot
detects asialo O-glycans
HGF
parental
ST3Gal4
ST3Gal1+
ST3Gal4
ST3Gal1
220
120
100
80
60
50
40
30
20
A)
ECL Lectin Blot
detects asialo N-glycans
HGF
parental
ST3Gal4
ST3Gal1+
ST3Gal4
ST3Gal1
220
120
100
80
60
50
40
30
20

Figure 13

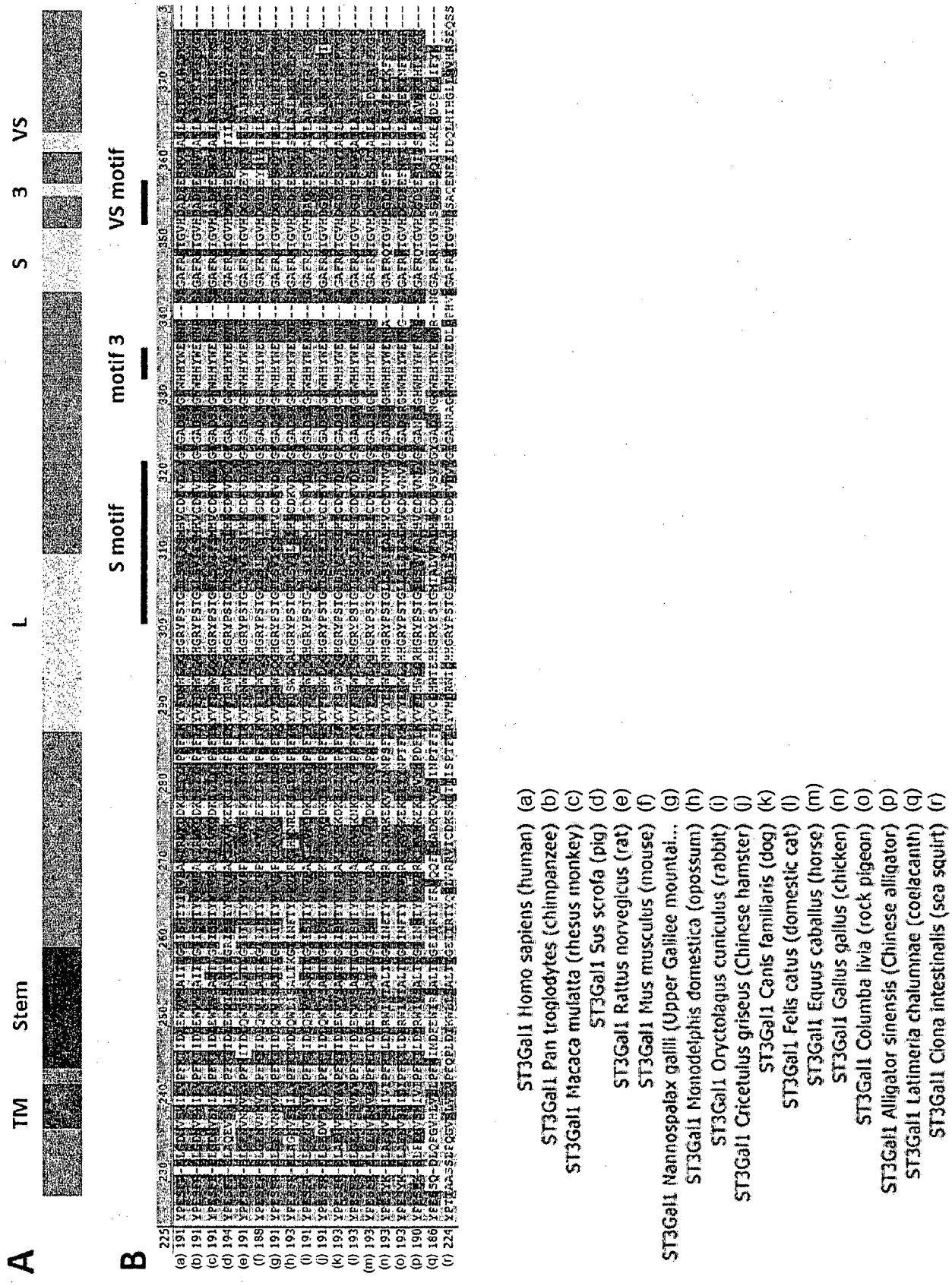

A
TM
Stem
L
S
3
VS
B
S motif
motif 3
VS motif
ST3Gal1 Homo sapiens (human) (a)
ST3Gal1 Pan troglodytes (chimpanzee) (b)
ST3Gal1 Macaca mulatta (rhesus monkey) (c)
ST3Gal1 Sus scrofa (pig) (d)
ST3Gal1 Rattus norvegicus (rat) (e)
ST3Gal1 Mus musculus (mouse) (f)
ST3Gal1 Nannospalax galilli (Upper Galilee mountai... (g)
ST3Gal1 Monodelphis domestica (opossum) (h)
ST3Gal1 Oryctolagus cuniculus (rabbit) (i)
ST3Gal1 Cricetulus griseus (Chinese hamster) (j)
ST3Gal1 Canis familiaris (dog) (k)
ST3Gal1 Felis catus (domestic cat) (l)
ST3Gal1 Equus caballus (horse) (m)
ST3Gal1 Gallus gallus (chicken) (n)
ST3Gal1 Columba livia (rock pigeon) (o)
ST3Gal1 Alligator sinensis (Chinese alligator) (p)
ST3Gal1 Latimeria chalumnae (coelacanth) (q)
ST3Gal1 Ciona intestinalis (sea squirt) (r)

Figure 14

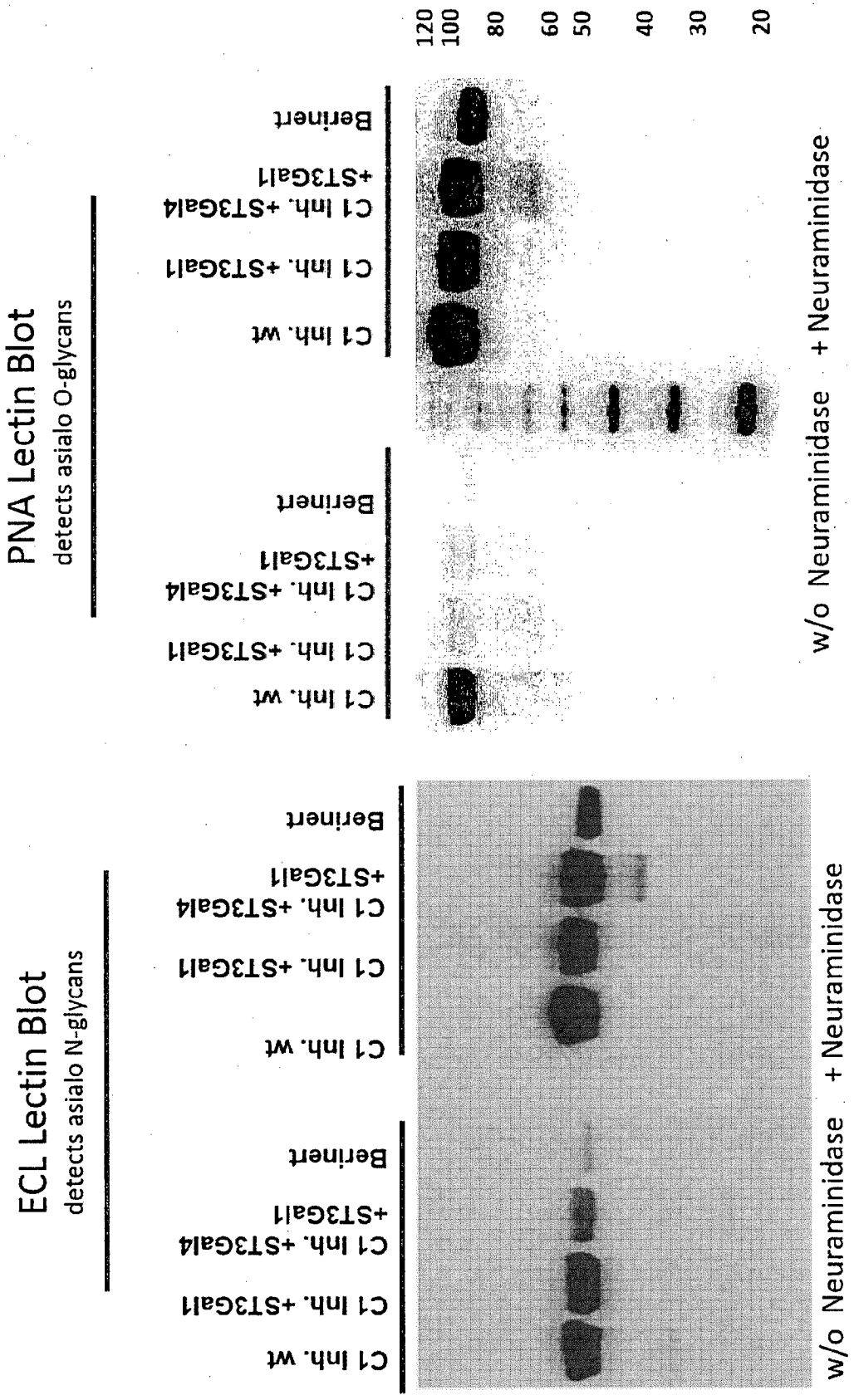

PNA Lectin Blot
detects asialo O-glycans
C1 Inh. wt
C1 Inh. +ST3Gal1
C1 Inh. +ST3Gal4 +ST3Gal1
Berinert
C1 Inh. wt
C1 Inh. +ST3Gal1
C1 Inh. +ST3Gal4 +ST3Gal1
Berinert
120
100
80
60
50
40
30
20
w/o Neuraminidase
+ Neuraminidase
ECL Lectin Blot
detects asialo N-glycans
C1 Inh. wt
C1 Inh. +ST3Gal1
C1 Inh. +ST3Gal4 +ST3Gal1
Berinert
C1 Inh. wt
C1 Inh. +ST3Gal1
C1 Inh. +ST3Gal4 +ST3Gal1
Berinert
w/o Neuraminidase
+ Neuraminidase

Figure 15

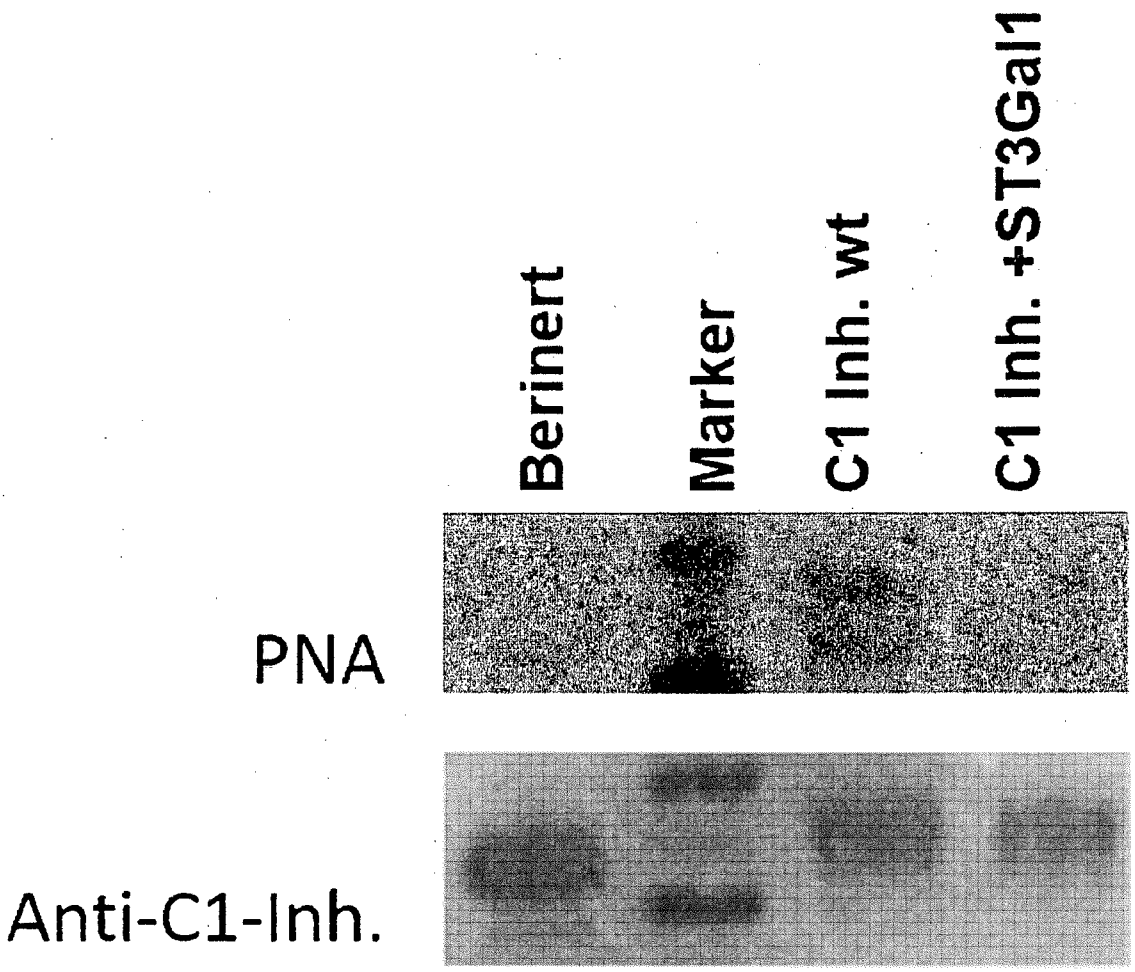


Figure 16

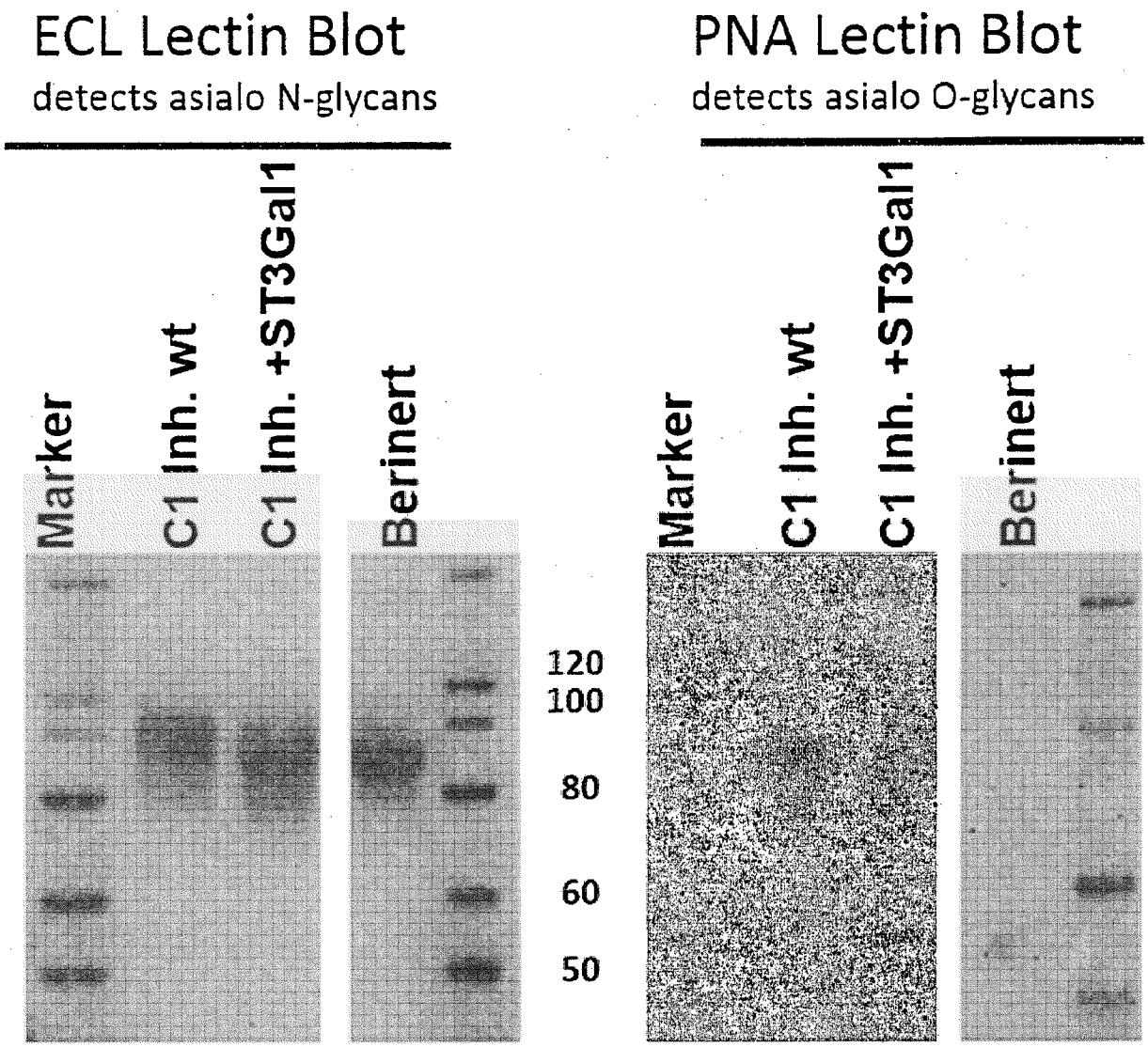

ECL Lectin Blot
detects asialo N-glycans
Marker
C1 Inh. wt
C1 Inh. +ST3Gal1
Berinert
120
100
80
60
50
PNA Lectin Blot
detects asialo O-glycans
Marker
C1 Inh. wt
C1 Inh. +ST3Gal1
Berinert

Figure 17