Supplemental data Fig. 1. Amino acid sequence of CBHI from *P. decumbens.*

The putative N-linked glycosylation sites are underlined, and the amino acid sequences of the four CBHI glycoforms acquired using MALDI-TOF are marked in red. N-linked glycosylation occurs at the asparagines (N) in the consensus sequence motif of N-X-S/T in the catalytic domain. Potential N-glycosylation sites are underlined. CBHI-A, CBHI-B, CBHI-C, and CBHI-D were identified using MALDI-TOF. Three identified peptides were acquired from MS/MS results and are marked in red.

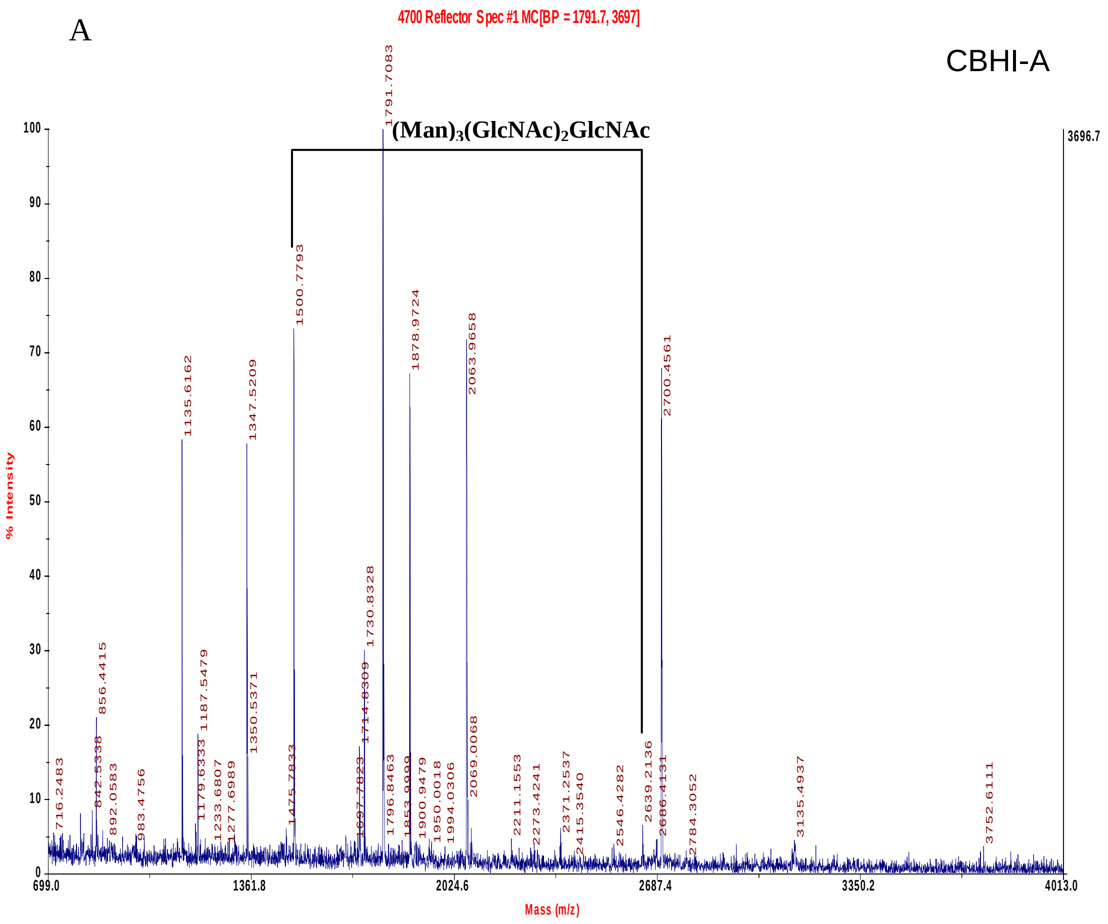
Supplemental data Fig.2. MALDI-TOF mass spectra and PMF of the four purified CBHI glycoforms (CBHI-A, CBHI-B, CBHI-C, and CBHI-D).

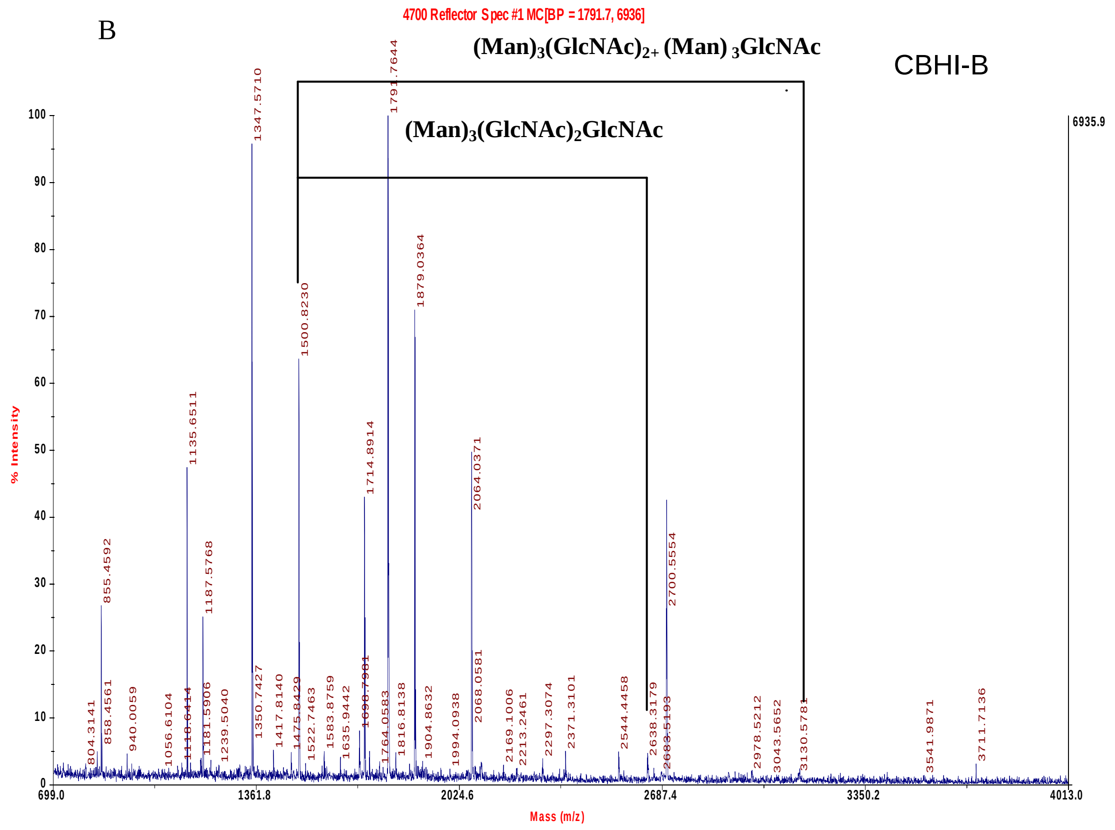
The image shows the PMF of the four glycoforms of CBHI. The main peaks in the PMF of the four CBHIs were nearly the same. The list of the peptide masses of the proteins purified from *P. decumbens* JU-A10 were analyzed using the peptide mass tool from ExPASy. Some peptide masses from the mass spectrum were more than the theoretical unmodified tryptic peptides of CBHI. Then, the peptide masses were taken into account and compared with the potential N-glycosylation site. The potential N-glycan structures were speculated according to the molecular weights of the glycans.

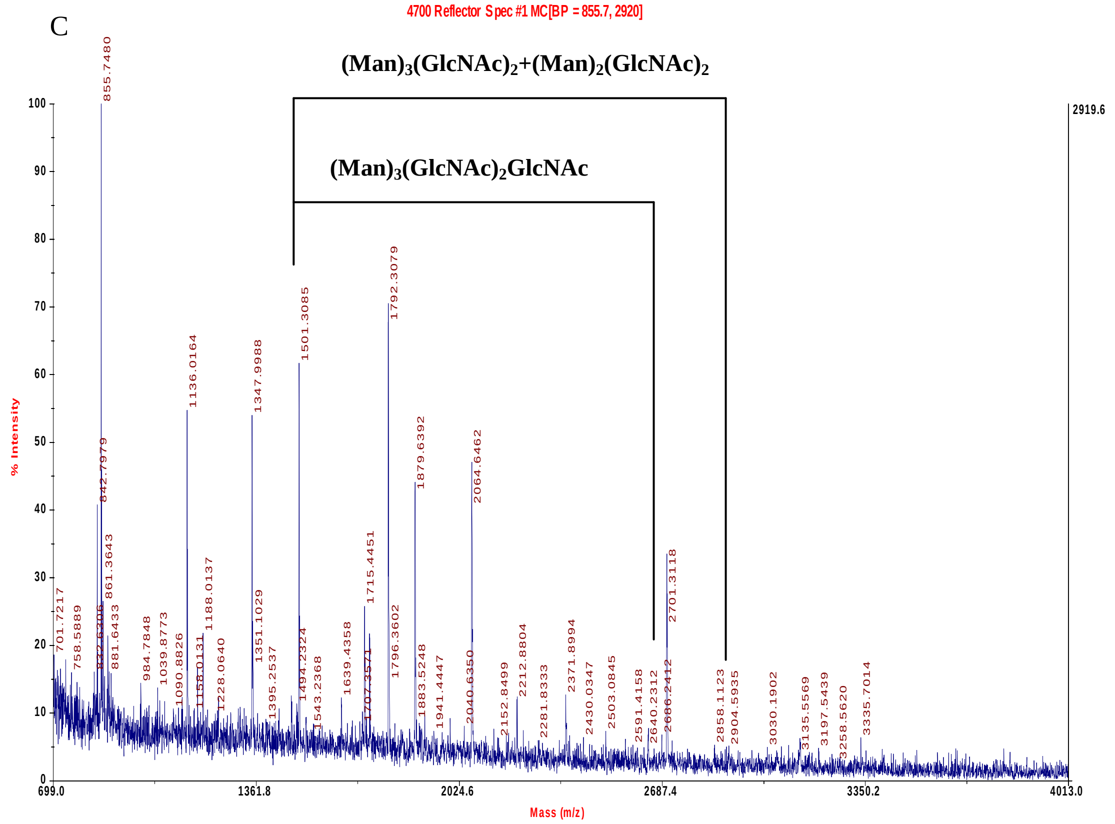
Fig.1

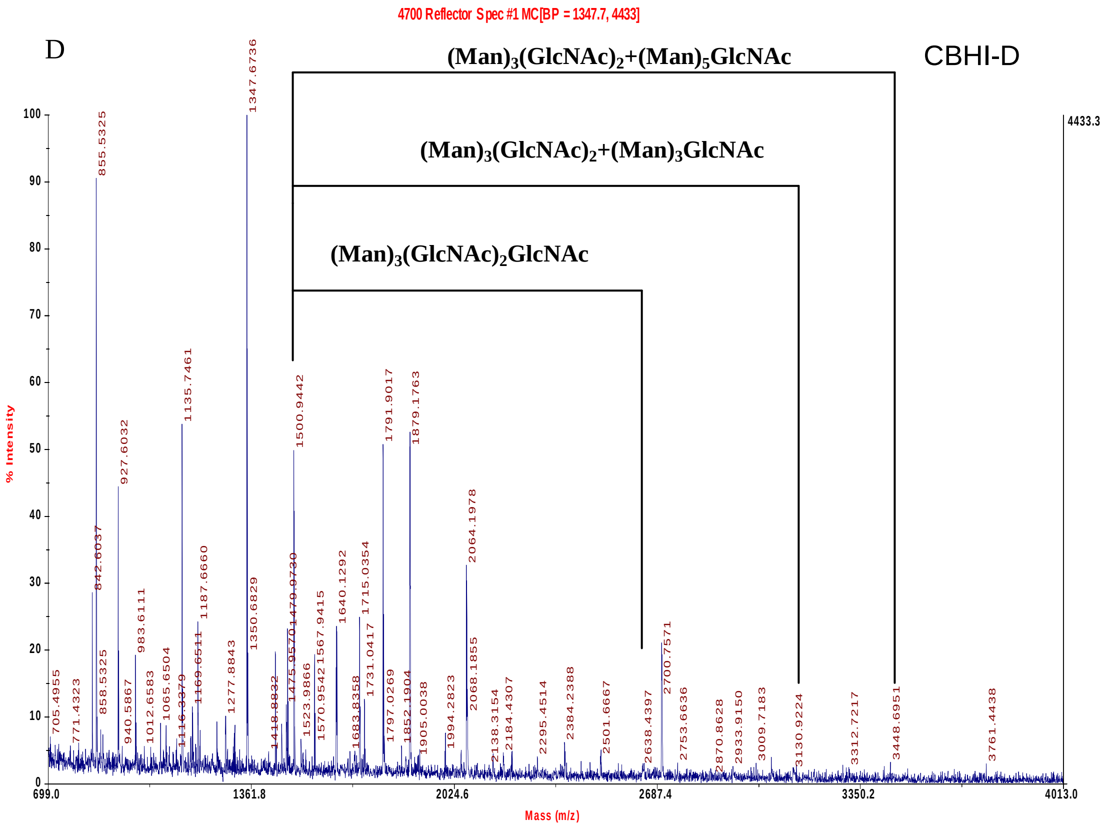
MKGSISYQIYKGALLLSSLLASVSAQGAGTLTAESHPALTWQKCSAGGSCTPVSGSVVIDANWRWVHDKNGKNC
YTGNTWDATLCPDDKTCAANCAVDGASYASTYGVTTSGNSLRINFVTQASQKNIGSRLYLLE**NDT**TYQKFNLLNQ
EFTFDVDVSNLPCGLNGALYFVDMDADGGMAKYPTNKAGAKYGTGYCDSQCPRDLKFINGIANVEGWTPSSND
PNSGVGGHGTCCAEMDIWEANSISEALTPHPCDTPGQTMCEGNACGGTYSNDRYAGTCDPDGCDFNPYRQGV
TNFYGPGMTVDTKSPFTVVTQFLTDDGTSTGTLSEIKRFYVQNGKVIGQPQSTVAGVSGNSITDSFCKAQKAAFG
DTDDFTKHGALAGMGAAFEEGMVLVMSLWDDHNSNMLWLDSTYPTTASSTTLGAKRGSCDISSGAPNDVESQN
ANSYVVFSNIKAGPIGSTFNSGSTGGG**NGS**GSTTTTKGSTTTTKAPTTTTTTTSKATTTTAASGGNGGGAAHWAQ
CGGVGYTGPTTCASPYTCTKQNEYYSQCL

Fig .2


A
4700 Reflector Spec #1 MC[BP = 1791.7, 3697]
CBHI-A
(Man)$_3$(GlcNAc)$_2$GlcNAc
% Intensity
100
90
80
70
60
50
40
30
20
10
0
3696.7
1791.7083
1500.7793
1878.9724
2063.9658
2700.4561
1135.6162
1347.5209
1730.8328
856.4415
1187.5479
1350.5371
1714.8309
2069.0068
716.2483
842.5338
892.0583
983.4756
1179.6333
1233.6807
1277.6989
1475.7833
1697.7823
1796.8463
1853.9999
1900.9479
1950.0018
1994.0306
2211.1553
2273.4241
2371.2537
2415.3540
2546.4282
2639.2136
2686.4131
2784.3052
3135.4937
3752.6111
699.0
1361.8
2024.6
2687.4
3350.2
4013.0
Mass (m/z)


B
4700 Reflector Spec #1 MC[BP = 1791.7, 6936]
(Man)$_3$(GlcNAc)$_{2+}$ (Man) $_3$GlcNAc
CBHI-B
(Man)$_3$(GlcNAc)$_2$GlcNAc
6935.9
% Intensity
100
90
80
70
60
50
40
30
20
10
0
699.0
1361.8
2024.6
2687.4
3350.2
4013.0
Mass (m/z)
804.3141
855.4592
858.4561
940.0059
1056.6104
1118.6414
1135.6511
1181.5906
1187.5768
1239.5040
1347.5710
1350.7427
1417.8140
1475.8429
1500.8230
1522.7463
1583.8759
1635.9442
1690.7901
1714.8914
1764.0583
1791.7644
1816.8138
1879.0364
1904.8632
1994.0938
2064.0371
2068.0581
2169.1006
2213.2461
2297.3074
2371.3101
2544.4458
2638.3179
2683.5193
2700.5554
2978.5212
3043.5652
3130.5781
3541.9871
3711.7136


C
4700 Reflector Spec #1 MC[BP = 855.7, 2920]
(Man)$_3$(GlcNAc)$_2$+(Man)$_2$(GlcNAc)$_2$
(Man)$_3$(GlcNAc)$_2$GlcNAc
2919.6
% Intensity
100
90
80
70
60
50
40
30
20
10
0
699.0
1361.8
2024.6
2687.4
3350.2
4013.0
Mass (m/z)
701.7217
758.5889
822.6305
842.7979
855.7480
861.3643
881.6433
984.7848
1039.8773
1090.8826
1136.0164
1158.0131
1188.0137
1228.0640
1347.9988
1351.1029
1395.2537
1494.2324
1501.3085
1543.2368
1639.4358
1707.3571
1715.4451
1792.3079
1796.3602
1879.6392
1883.5248
1941.4447
2040.6350
2064.6462
2152.8499
2212.8804
2281.8333
2371.8994
2430.0347
2503.0845
2591.4158
2640.2312
2686.2412
2701.3118
2858.1123
2904.5935
3030.1902
3135.5569
3197.5439
3258.5620
3335.7014


4700 Reflector Spec #1 MC[BP = 1347.7, 4433]
D
CBHI-D
$(Man)_3(GlcNAc)_2$+$(Man)_5$GlcNAc
$(Man)_3(GlcNAc)_2$+$(Man)_3$GlcNAc
$(Man)_3(GlcNAc)_2$GlcNAc
4433.3
% Intensity
100
90
80
70
60
50
40
30
20
10
0
705.4955
771.4323
842.6037
855.5325
858.5325
927.6032
940.5867
983.6111
1012.6583
1065.6504
1116.3379
1135.7461
1169.6511
1187.6660
1277.8843
1347.6736
1350.6829
1418.8832
1475.9570
1479.9730
1500.9442
1523.9866
1567.9415
1570.9542
1640.1292
1683.8358
1715.0354
1731.0417
1791.9017
1797.0269
1852.1904
1879.1763
1905.0038
1994.2823
2064.1978
2068.1855
2138.3154
2184.4307
2295.4514
2384.2388
2501.6667
2638.4397
2700.7571
2753.6636
2870.8628
2933.9150
3009.7183
3130.9224
3312.7217
3448.6951
3761.4438
699.0
1361.8
2024.6
2687.4
3350.2
4013.0
Mass (m/z)