Table S1. **Chemical shifts of products of synthetic reactions of rRaMP1 and rRaMP2 in the ^{1}H- and ^{13}C- NMR spectra.**

(a) Man-Glc

		δ_C (ppm)	δ_H (ppm)		*J* (H, H)
Man	1	102.87*[a]	4.75*[b]	d	0.9
	2	73.36	4.07	m	
	3	75.62	3.65	dd	1.5, 3.1
	4	69.45	3.58	m	
	5	79.23	3.42	ddd	2.4, 6.8, 9.5
	6	63.74	3.95	dd	2.3, 12.2
			3.75	m	
α-Glc (41%)	1	94.65	5.23	d	3.9
	2	73.93	3.59	m	
	3	74.12	3.88	dd	2.7, 10.8
	4	81.64*[b]	3.67*[a]	m	
	5	72.75	3.93	m	
	6	62.95	3.81	m	
			3.77	m	
β-Glc (59%)	1	98.59	4.67	d	8.1
	2	76.59	3.29	dd	8.0, 9.4
	3	77.04	3.67	m	
	4	81.53*[b]	3.68*[a]	m	
	5	77.43	3.59	m	
	6	63.06	3.73	dd	2.6, 12.3
			3.86	m	

*HMBC cross peaks were observed.

(b) 4-*O*-β-D-mannosyl-D-xylose

		δ_C (ppm)	δ_H (ppm)		*J* (H, H)
Man	1	101.17*[a]	4.79*[b]	s	
	2	73.59	3.98	dd	3.1, 0.9
	3	75.68	3.66	m	
	4	69.57	3.57	m	
	5	79.14	3.42	m	
	6	63.85	3.74	dd	12.2, 2.3
			3.93	dd	12.3, 6.5
α-Xyl (36%)	1	94.78	5.19	d	3.7
	2	73.99	3.59	m	
	3	73.91	3.81	m	
	4	79.22*[b]	3.84*[a]	m	
	5	61.53	3.82	m	
			3.73	m	
β-Xyl (64%)	1	99.29	4.59	d	7.9
	2	76.59	3.27	dd	9.3, 7.9
	3	76.87	3.60	m	
	4	79.14*[b]	3.88*[a]	m	
	5	65.76	4.06	dd	11.6, 5.4
			3.37	m	

*HMBC cross peaks were observed.

(c) 4-*O*-β-D-mannosyl-cellobiose

		δ_C (ppm)	δ_H (ppm)		*J* (H, H)
Man	1	102.86*[a]	4.75*[b]	s	
	2	73.35	4.06	d	3.1
	3	75.60	3.65	m	
	4	69.45	3.59	m	
	5	79.21	3.42	ddd	1.8, 6.8, 9.4
	6	63.74	3.94	m	
			3.74	m	
Glc	1	105.17*[c]	4.54*[d]	d	7.8
	2	75.62	3.37	m	
	3	76.81	3.69	m	
	4	81.32*[b]	3.69*[a]	m	
	5	77.44	3.61	m	
	6	62.90	3.74	m	
			3.95	m	
α-Glc (39%)	1	94.63	5.23	d	3.9
	2	74.04	3.83	m	
	3	74.10	3.58	m	
	4	81.44*[d]	3.67*[c]	m	
	5	72.93	3.96	m	
	6	62.69	3.87	m	
			3.88	m	
β-Glc (61%)	1	98.56	4.66	d	7.8
	2	76.71	3.28	dd	8.1, 9.2
	3	77.05	3.64	m	
	4	81.28*[d]	3.67*[c]	m	
	5	77.61	3.61	m	
	6	62.82	3.80	m	
			3.95	m	

*HMBC cross peaks are observed.

(d) 4-*O*-β-D-mannosyl-*N,N'*-diacetylchitobiose

		δ_C (ppm)	δ_H (ppm)		*J* (H, H)
Man	1	102.88	4.77*[a]	s	
	2	73.30	4.07	d	3.3
	3	75.57	3.78	m	
	4	69.42	3.58	m	
	5	79.22	3.43	m	
	6	63.73	3.72	m	
			3.93	dd	2.2, 12.3
GlcNAc	1	104.19*[b]	4.62*[b]	d	7.9
	2	57.86	3.77	m	
	C=O	177.38			
	CH_3	24.91	2.07	s	
	3	74.79	3.77	m	
	4	81.46*[a]	3.76	m	
	5	77.39	3.62	m	
	6	62.87	3.69	m	
			3.77	m	
α-GlcNAc (77%)	1	93.23	5.20	d	2.5
	2	56.44	3.89	m	
	C=O	177.27			
	CH_3	24.68	2.05	s	
	3	72.05	3.89	m	
	4	82.51*[b]	3.64*[b]	m	
	5	75.29	3.67	m	
	6	62.81	3.81	m	
			3.88	m	
β-GlcNAc (23%)	1	97.62	4.70	d	8.2
	2	58.91	3.69	m	
	C=O				
	CH_3				
	3	72.80	3.89	m	
	4	82.06	3.65*[b]	m	
	5	77.39	3.53	m	
	6	62.93	3.66	m	
			3.86	m	

*HMBC cross peaks are observed. Cross peaks between C1 of mannosyl residue and H4 of GlcNAc and between H1 of internal GlcNAc and C4 of β-GlcNAc were not detected.