Supplemental Table 1 ^{1}H-NMR chemical shifts of TQM-5-1, TQM-6, TQM-7 and TQM-8-4 separated from tiger quoll

Reporter Group	Residue	Chemical shifts, δ (coupling constants, Hz)			
		TQM-5-1	TQM-6	TQM-7	TQM-8-4
H-1	Glcα	5.223(4.0)	5.223(4.0)	5.224(3.4)	5.223(3.9)
	Glcβ	4.670(8.0)	4.667(8.0)	4.667(8.0)	4.665(8.1)
	Gal(β1-4)	4.499(8.0)	4.511(8.0)	4.511(8.0)	4.451(7.5)
		4.471(8.0)			
	Gal(β1-3)	4.611(7.4)	4.677(8.0)	4.612(8.0)	-
			4.616(8.0)		
	GlcNAc(β1-6)	4.643(7.4)	-	-	-
		4.651(7.4)			
H-4	Gal(β1-4)	4.181(3.4)[a]	4.196(2.9)[a]	4.199(3.4)[a]	
	Gal(β1-3)		4.202(3.4)[a]		
NAc	GlcNAc(β1-6)	2.062	-	-	-

[a] $J_{4,3}$

Supplemental Table 2 ^{1}H-NMR chemical shifts of TQM-3-1, TQM-4-7, TQM-4-5 and TQM-4-8 separated from tiger quoll milk

Reporter Group	Residue	Chemical shifts, δ (coupling constants, Hz)			
		TQM-3-1	TQM-4-7	TQM-4-5	TQM-4-8
H-1	Glcα	5.224(4.0)	5.224(3.6)	5.225(3.6)	5.224(4.0)
	Glcβ	4.672(8.0)	4.670(7.9)	4.668(8.1)	4.670(8.0)
	Gal(β1-4)	4.500(8.0)	4.500(7.4)	4.513(7.9)	4.500(7.4)
		4.475(8.0)	4.532(7.9)	4.473(8.4)	4.472(8.0)
	Gal(β1-3)	4.688(7.4)	4.612(7.7)	4.681(7.9)	4.677(8.0)
		4.616(8.0)		4.615(7.7)	4.616(7.4)
	GlcNAc(β1-6)	4.663(8.0)	4.651(7.9)	4.591(7.4)	4.651(7.4)
		4.656(8.6)	4.644(7.9)		4.644(6.9)
		4.594(8.0)			
H-4	Gal(β1-4)	4.156(2.9)[a]	4.198(3.5)[a]	4.181(3.5)[a]	4.180(3.4)[a]
			4.180(3.3)[a]		
	Gal(β1-3)	4.172(3.4)[a]		4.171(3.5)[a]	4.204(3.4)[a]
NAc	GlcNAc(β1-6)	2.066	2.062	2.044	2.064
		2.043			

[a] $J_{4,3}$

Supplemental Table 3 ^{1}H-NMR chemical shifts of TQM-2-3, TQM-1-2-1, TQM-1-2-2 and TQM-1-2-4 separated from tiger quoll milk

Reporter Group	Residue	Chemical shifts, δ (coupling constants, Hz)			
		TQM-2-3	TQM-1-2-1	TQM-1-2-2	TQM-1-2-4
H-1	Glcα	5.228(3.4)	5.226(3.6)	5.228(3.5)	5.230(3.6)
	Glcβ	4.674(7.9)	4.672	4.672	4.672(8.1)
	Gal(β1-4)	4.469	4.467(7.7)	4.468(7.4)	4.470(7.7)
		4.476(7.6)	4.475(7.6)	4.475(7.7)	4.476(7.7)
		4.503(7.7)	4.501(8.1)	4.488(7.9)	4.503(7.9)
		4.526(7.9)	4.506(8.1)	4.522	4.506(8.2)
			4,554(7.5)	4.554	4.523(7.9)
					4.553(8.1)
	Gal(β1-3)	4.614(7.3)	4.617(7.6)	4.618(7.5)	4.619(8.1)
		4.618(8.3)	4.625(8.1)	4.688(8.2)	4.687
		4.686(7.1)	4.689		
		4.697			
	GlcNAc(β1-6)	4.645	4.644(8.3)	4.644	4.644
		4.652	4.652	4.596	4.649
		4.592	4.593(8.3)		4.591(8.0)
H-3	Gal(β1-3 /4)		4.118		4.112
H-4	Gal(β1-3 /4)			4.171	
	Gal(β1-3)	4.169(2.2)[a]	4.169(3.5)[a]		4.172(3.6)[a]
	Gal(β1-4)	4.138(2.5)[a]	4.156(3.1)[a]		4.155
		4.180(3.2)[a]			4.166
H-3 ax	Neu5Ac(α2-3)	-	1.801(11.9[b],-12.1[c])	1.801(11.3[b],-11.3[c])	1.801(12.1[b],-12.1[c])
H-3 eq	Neu5Ac(α2-3)	-	2.761(4.2)[d]	2.760	2.760(4.7)[d]
NAc	GlcNAc(β1-6)	2.073	2.063	2.063	2.071
		2.068	2.041	2.044	2.068
		2.065			2.063
		2.045			2.044
					2.041
	Neu5Ac(α2-3)	-	2.029	2.029	2.030

[a] $J_{4,\ 3}$ [b] $J_{3ax,\ 4}$ [c] $J_{ax,\ 4eq}$ [d] $J_{3eq,\ 4}$