

Table S3. Summary of all structures observed in the MALDI-TOF-MS spectra of the duodenum tissue from rabbits, Samples 1-10. The symbol presentation of O-glycans is based on the nomenclature used in Essentials of Glycobiology textbook (<http://www.ncbi.nlm.nih.gov/books/NBK1908>) and adopted by the Consortium for Functional Glycomics (<http://www.functionalglycomics.org>). Mass values  $[M + Na]^+$ , cartoon representation of structure and epitope types are reported for each peak detected. Intensity of the peaks observed is reported for each sample analyzed:

Mass	Structure	Epitope	Sample									
			1	2	3	4	5	6	7	8	9	10
708		H	ND	++	+	++	ND	+	-	ND	ND	++
912		B	+++	ND	ND	+	+	+	ND	+	+	ND
954		A	+++	ND	ND	-	-	++	+	-	-	--
		H or Lewis X	ND	+++	+	+	++	-	-	+	+	+
		H	ND	-	-	ND	--	ND	ND	--	ND	-
1128		Lewis Y	ND	+	+	ND	+	+	ND	ND	ND	+
1158		H or Lewis X	ND	ND	ND	ND	ND	+	ND	ND	ND	-
		H	ND	ND	ND	ND	ND	-	ND	ND	ND	+
1199		H or Lewis X	ND	+	ND	--	--	ND	ND	ND	ND	ND
		A	ND	ND	ND	++	++	+++	+	ND	+	ND
		A	ND	ND	ND	-	-	-	ND	ND	ND	ND
1332		H	ND	+	ND	ND	ND	+	ND	ND	ND	++
1362		B	+	ND	ND	ND	ND	ND	ND	ND	ND	ND
1373		A	ND	ND	ND	+	+	+	ND	ND	ND	ND
1403		A	++	+	-	ND	ND	++	ND	ND	ND	ND
		H	-	-	ND	ND	ND	ND	ND	ND	ND	ND
		H or Lewis X	ND	ND	+	ND	ND	-	ND	ND	ND	ND
		H or Lewis X	--	--	--	ND	ND	ND	ND	ND	ND	ND
1444		A	ND	ND	ND	ND	ND	+	ND	ND	ND	ND
1577		A and Lewis X/H	ND	-	+	ND	ND	+	ND	ND	ND	ND
		H and/or Lewis X	ND	+	ND	ND	ND	ND	ND	ND	ND	ND
		A and H	ND	+	ND	ND	ND	ND	ND	ND	ND	ND
1648		A	ND	ND	ND	ND	ND	+	ND	ND	ND	ND
1822		A and Lewis X/H	ND	ND	ND	ND	ND	+	ND	ND	ND	ND

ND = not detected

-- = very minor component (<25%)

- = minor component (25-50%)

+ = major component (> 25%)

++ = very major component (25-50%)

+++ = most abundant component (>50%)