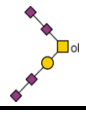
Supplementary Data 2 (1/2) - Distribution of mucin type O-glycans

No	theoritical m/z	Scheme	*skin [sk]*	*gill [gi]*	*brain [br]*	*heart [he]*	*liver [li]*	*intestine [in]*	*testis [te]*	*ovary [ov]*
OG1	854,4							✓		
OG2	895,4		✓	✓	✓	✓	✓	✓	✓	
OG3						✓	✓	✓		
OG4	925,4			✓		✓				
OG5						✓				
OG6	936,4			✓						
OG7	953,5		✓	✓				✓		✓
OG8	983,0					✓		✓	✓	
OG9	1141,0								✓	
OG10	1174,5							✓		
OG11								✓		
OG12	1215,6							✓		
OG13								✓		
OG14	1239,6									✓
OG15	1256,6		✓	✓	✓	✓	✓	✓	✓	
OG16	1286,6			✓	✓	✓		✓		
OG17			✓	✓	✓	✓		✓		
OG18	1314,6		✓		✓			✓	✓	✓
OG19	1316,6		✓			✓				

Supplementary Data 2 (2/2)

No	theoritical m/z	Scheme	*skin [sk]*	*gill [gi]*	*brain [br]*	*heart [he]*	*liver [li]*	*intestine [in]*	*testis [te]*	*ovary [ov]*
OG20	1344,8		✓		✓	✓	✓	✓	✓	✓
OG21					✓	✓				
OG22					✓	✓				
OG23	1361,7		✓			✓	✓	✓	✓	✓
OG24			✓			✓				
OG25	1374,6		✓			✓				✓
OG26						✓				
OG27	1617,8		✓	✓						
OG28			✓		✓	✓		✓	✓	
OG29	1647,8				✓					
OG30	1722,8					✓		✓	✓	
OG31	1752,8					✓		✓	✓	
OG32	1791,9			✓						
OG33	1979,0				✓					

Supplementary Data 2 - The inclusion criteria of individual molecules in an organ were (1) observation of corresponding MS signal in three independent experiments and (2) confirmation of individual compounds by MS/MS analysis of permethylated glycans. The structural analysis of O-glycans was mostly based on the CID MS/MS fragmentation patterns of permethylated O-glycans in positive mode, in accordance with knowledge of embryonic O-glycans[1–3]. Graphical representation is based on accepted conventions for O-glycans and monosaccharide nomenclature.[4,5] The interglycosidic bonds between monosaccharides are represented using the conventional positions as I, C2 position; ⁄ , C3 position; —, C4 position; \ , C6 position, except for (α2,8) linkages between sialic acids which do not follow any convention.

Supplementary References

1. Guérardel, Y., Chang, L.-Y., Maes, E., Huang, C.-J. & Khoo, K.-H. Glycomic survey mapping of zebrafish identifies unique sialylation pattern. *Glycobiology* **16,** 244–257 (2006).
2. Chang, L.-Y. *et al.* Developmental regulation of oligosialylation in zebrafish. *Glycoconj. J.* **26,** 247–261 (2009).
3. Vanbeselaere, J. *et al.* Mapping the expressed glycome and glycosyltransferases of zebrafish liver cells as a relevant model system for glycosylation studies. *J. Proteome Res.* **11,** 2164–2177 (2012).
4. *Essentials of Glycobiology*. (Cold Spring Harbor Laboratory Press, 2015).
5. Varki, A. *et al.* Symbol Nomenclature for Graphical Representations of Glycans. *Glycobiology* **25,** 1323–1324 (2015).