Supporting Information

Helicobacter pylori binding non-acid glycosphingolipids in the human stomach

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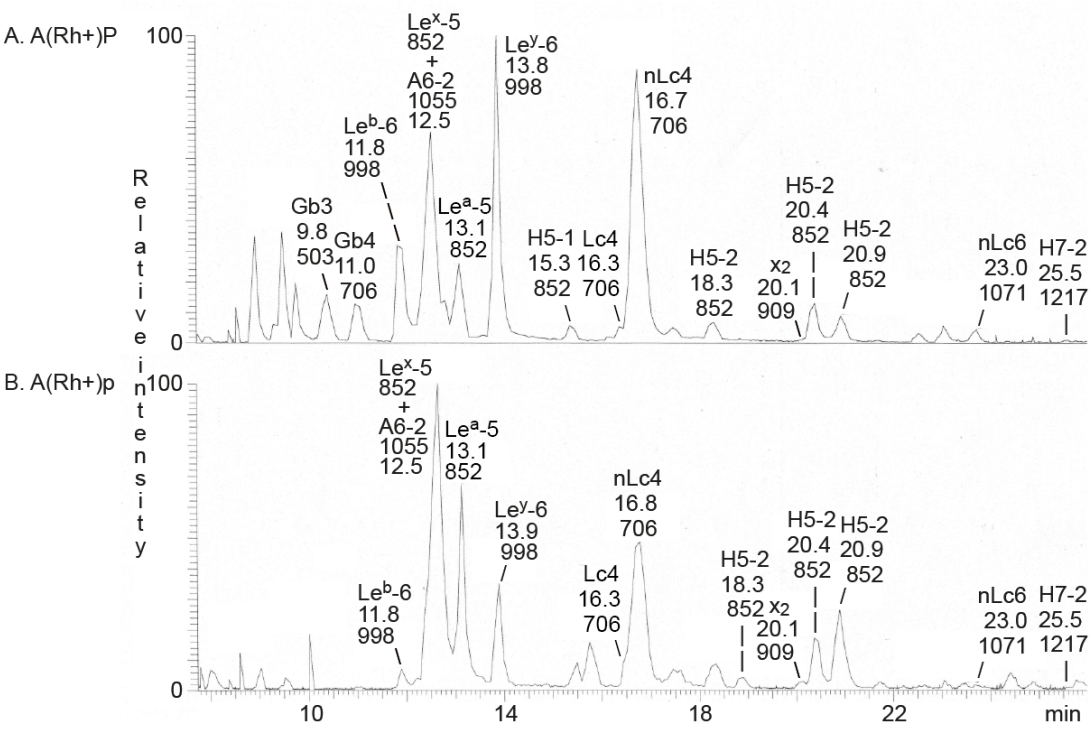

Figure S1. **LC-ESI/MS of the oligosaccharides obtained from the total non-acid glycosphingolipid fraction from human blood group A(Rh+)P and A(Rh+)p stomachs by hydrolysis with endoglycoceramidase II from *Rhodococcus* spp.**

(*A*) Base peak chromatogram from LC-ESI/MS of the oligosaccharides obtained from human stomach blood group A(Rh+)P.

(*B*) Base peak chromatogram from LC-ESI/MS of the oligosaccharides obtained from human stomach blood group A(Rh+)p.

The identification of oligosaccharides was based on their retention times, determined molecular masses and subsequent MS^2 sequencing. The oligosaccharides identified in the chromatograms were: Gb3, Galα4Galβ4Glc; Gb4, GalNAcβ3Galα4Galβ4Glc; Le^b-6, Fucα2Galβ3(Fucα4)GlcNAcβ3Galβ4Glc; Le^x-5, Galβ4(Fucα3)GlcNAcβ3Galβ4Glc; A6-2, GalNAcα3(Fucα2)Galβ4(Fucα3)GlcNAcβ3Galβ4Glc Le^a-5, Galβ3(Fucα4)GlcNAcβ3Galβ4Glc; Le^y-6, Fucα2Galβ4(Fucα3)GlcNAcβ3Galβ4Glc; nLc4, Galβ4GlcNAcβ3Galβ4Glc; H5-1, Fucα2Galβ3GlcNAcβ3Galβ4Glc; Lc4, Galβ3GlcNAcβ3Galβ4Glc; nLc4, Galβ43GlcNAcβ3Galβ4Glc; H5-2, Fucα2Galβ4GlcNAcβ3Galβ4Glc; x_2, GalNAcβ3Galβ4GlcNAcβ3Galβ4Glc; nLc6, Galβ4GlcNAcβ3Galβ4GlcNAcβ3Galβ4Glc; H7-2, Fucα2Galβ4GlcNAcβ3Galβ4GlcNAcβ3Galβ4Glc.

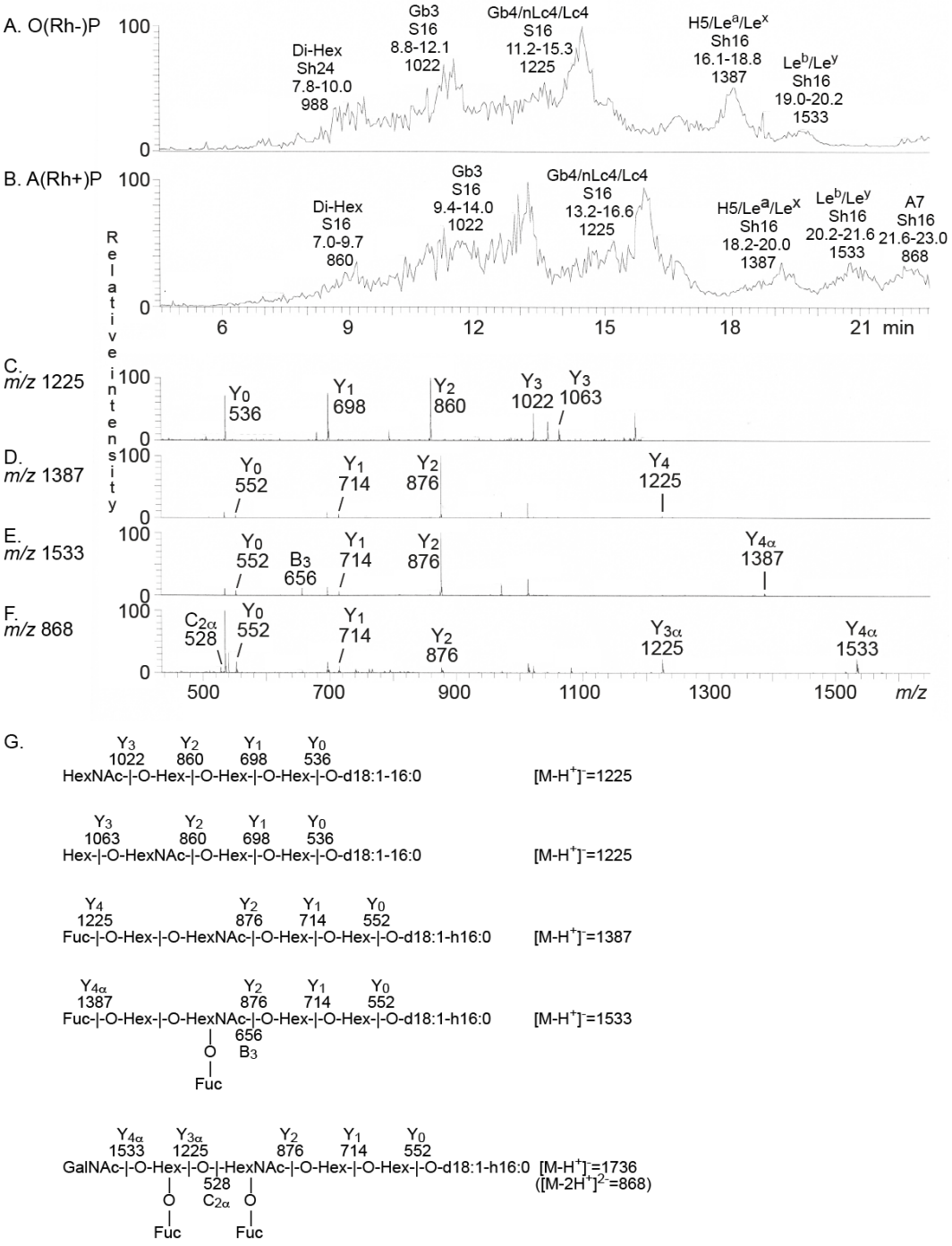

Figure S2. **LC-ESI/MS of the native total non-acid glycosphingolipids of human stomach.**
(*A*) Base peak chromatogram from LC-ESI/MS of the non-acid glycosphingolipids from human stomach blood group O(Rh-)P.
(*B*) Base peak chromatogram from LC-ESI/MS of the non-acid glycosphingolipids from human stomach blood group A(Rh+)P.
(*C*) MS^2 of the ion at *m/z* 1225 from LC-ESI/MS of the non-acid glycosphingolipids from human stomach blood group A(Rh+)P (retention time 16.4 min).

(*D*) MS^2 of the ion at *m/z* 1387 from LC-ESI/MS of the non-acid glycosphingolipids from human stomach blood group A(Rh+)P (retention time 19.2 min).
(*E*) MS^2 of the ion at *m/z* 1533 from LC-ESI/MS of the non-acid glycosphingolipids from human stomach blood group A(Rh+)P (retention time 20.7 min).
(*F*) MS^2 of the ion at *m/z* 868 from LC-ESI/MS of the non-acid glycosphingolipids from human stomach blood group A(Rh+)P (retention time 22.1 min).
The identification of glycosphingolipids was based on their retention times, determined molecular masses and subsequent MS^2 sequencing.See Table 2 for abbreviations of oligosaccharide structures. A7, GalNAcβ3(Fucα2)Galβ3/4(Fucα3/4)GlcNAcβ3Galβ4Glcβ1Cer. In the nomenclature for ceramides S denotes sphingosine (d18:1, 1,3-dihydroxy-2-aminooctadecene). Fatty acids with a 2-hydroxy group are denoted by the prefix h before the abbreviation. Thus, S16 denotes sphingosine with non-hydroxy 16:0 fatty acid, and Sh16 denotes sphingosine with hydroxy 16:0 fatty acid.