



Supplementary Figure S4. 500-MHz ^1H NMR spectra of isolated ΔM , ΔMM , ΔMMM , ΔG , and ΔGG , recorded in D_2O at 300K (See also Supplementary Fig S5). $\Delta 4\text{M}\alpha$, $\Delta 4\text{M}\beta$, and $\Delta 4\text{M}$ mean Δ H-4 of the presented saccharides, etc.; $\text{Mred}1\alpha$ and $\text{Mred}1\beta$ mean M H-1 of the reducing-end α -M and β -M residue, respectively, in the presented saccharides, etc.; $\text{M1Mred}\alpha$, $\text{M1Mred}\beta$, and M1M mean M H-1 of internal M-residues in the presented tri or tetrasaccharide, etc.; $\text{Gred}1\alpha$ and $\text{Gred}1\beta$ mean G H-1 of the reducing-end α -G and β -G residue, respectively, in the presented saccharides, etc.; G1 means G H-1 of the internal G-residue in the presented trisaccharide, etc. (see Table 2 in main text).