Supplemental Fig. 1: Lactoside acceptors with hydrophobic aglycons are better substrates of CSTII. In two separate reactions, Compound 1 (10 μM) and Compound 2 (10 μM) were incubated with CSTII (3-3.5 μg) in the presence of 10 mM CMP-NeuNAc, and 10 mM MgCl$_2$ in 50 mM HEPES Buffer, pH 7.5 for 30 min at 37 degC. Compound 3 (1 mM) was reacted with CSTII (50 μg) in the presence of 5 mM CMP-NeuNAc, 40 mM MnCl$_2$, in 200 mM cacodylate buffer, pH 8.0 for 4h at 37 degC. All reactions were quenched by addition of ethanol to 25% by volume. Samples were dried overnight and subjected to HPLC. Percent conversion was calculated from HPLC chromatograms. The total area under the curve of product peaks was divided by the area under the curve of all peaks and multiplied by 100.