



**Figure S4: Representative isothermal titration calorimetry (ITC) results for the SGBP-A site-directed mutants with XyG.** All titrations were performed in 20 mM Hepes, 100 mM NaCl pH 7.0 and at 25 °C. In each case, the upper graph shows the raw heat signal for the 2  $\mu$ L injections of carbohydrate into protein; the bottom graph shows the integrated heats and, where appropriate, fits to a 1:1 binding model. Concentrations of the protein and glycan are indicated in figure. (A) SGBP-A(W82A, W283A, W306A), (B) SGBP-A(W82A), and (C) SGBP-A(W306A).