

**Table S1** Hydrolysis activity of BcXyl1 and BcXyl1<sup>rec</sup>

| Protein                     | Units/mg  | (%)      |
|-----------------------------|-----------|----------|
| <b>BcXyl1</b>               | 9.97±0.7  | 100±6.6  |
| <b>BcXyl1<sup>rec</sup></b> | 0.54±0.05 | 2.3±0.54 |

Values represent the averages of three independent measurements with three replicates each. Standard errors are shown.