

## **Supplementary Data**

### **Directed modification anti-inhibitory proteins of a GH11 thermostable xylanase AusM and its application in bread making**

Dong Zhang<sup>1,2</sup>, Jing Huang<sup>3</sup>, Youyi Liu<sup>1</sup>, Xingyi Chen, Tiecheng Gao<sup>4</sup>, Ning Li<sup>4</sup>, Weining Huang<sup>3,\*</sup>, Minchen Wu<sup>1,2,\*</sup>

<sup>1</sup> Wuxi School of Medicine, Jiangnan University, Wuxi 214122, PR China;

<sup>2</sup> Key Laboratory of Carbohydrate Chemistry and Biotechnology, Ministry of Education, School of Biotechnology, Jiangnan University, Wuxi 214122, PR China;

<sup>3</sup> State Key Laboratory of Food Science and Technology, and the Laboratory of Baking and Fermentation Science, Cereals/Sourdough and Nutritional Functionality Research, Jiangnan University, Wuxi 214122, PR China;

<sup>4</sup> Guangzhou Puratos Food Co. Ltd., Guangzhou 511400, PR China

Dong Zhang and Jing Huang, the two first authors, contributed equally to this work

\*Correspondences: wnhuang@jiangnan.edu.cn (W. N. Huang), biowmc@126.com (M. C. Wu)

## Contents

Table S1 The preparation of optimal temperature and thermostability of various enzymes.

| Enzyme                    | Optimal temperature (°C) | Residual activity (%) | The incubation temperature and time(min) | Reference  |
|---------------------------|--------------------------|-----------------------|--|------------|
| <i>AnxynA</i>             | 50                       | 50                    | 50 °C, 18.2 min                          | [42]       |
| <i>SrXynA</i>             | 55                       | >70                   | 50 °C, 30 min                            | [43]       |
| <i>PoXYN11A</i>           | 50                       | 14                    | 55 °C, 15 min                            | [37]       |
| <i>MhxyI</i>              | 55                       | 30                    | 70 °C, 60 min                            | [38]       |
| <i>BpCX I-V</i>           | 55                       | 38-42                 | 50 °C, 180 min                           | [44]       |
| <i>AnxA</i>               | 50                       | >70                   | 25 °C, 60 min                            | [45]       |
| <i>AusM<sup>PKK</sup></i> | 60                       | 85.97                 | 70 °C, 60 min                            | This study |