

Additional file 5: **Figure S5**. Bioinformatics analysis of BnPDFL. (**a**) *BnPDFL* secretion signal peptide predication by web tool SignaIP 4.0 server. The signal peptide prediction cleavage site is between position 25 and 26 amino acids. (**b**) Phylogenetic relationship of defensin proteins in rice (CAL1), *Arabidopsis thaliana* (AtPDF2s) and *Brassica napus* (BnPDFL, Q58QQ0). The 0.1 scale shows substitution distance.