



Figure S7 Detailed data of Gene expression profiles and chitin distribution in various parts of segmental cuticle in Dazao and Dazao-*stony*. **A.** Detailed data of cuticular gene expression profiles and chitin distribution in different parts of Dazao dorsal segment cuticle. (i) and (iv) represent gene expression profiles ($n=3$) and chitin content ($n=4$) of the internodes and intersegmental folds in Dazao, respectively. (ii) and (v) represent the gene expression profiles ($n=3$) and chitin content ($n=3$) of AP and PP in Dazao, respectively. (iii) and (vi) represent gene expression profiles ($n=3$) and chitin content ($n=3$) of the anterior and remaining parts (posterior parts and intersegmental folds) in Dazao, respectively. Data are presented as mean values \pm S.D. Student's *t*-test, *represent $p<0.05$, **represents $p<0.01$. **B.** Detailed data of cuticular gene expression profiles and chitin quantification in different parts of Dazao-*stony* segment. (i) represents gene expression profiles ($n=3$) of internodes and intersegmental folds in Dazao-*stony*. Data are presented as mean values \pm S.D. Student's *t*-test, ** represents $p<0.01$. (ii) represents the chitin content ($n=4$) of the internodes and variant intersegmental folds in Dazao-*stony*. Data are presented as mean values \pm S.D. Student's *t*-test, *represents $p<0.05$. **C.** Derived schematic diagram for formation of the abnormal intersegmental fold in *stony* mutant. The black line represents the boundary of internode and intersegmental fold in Dazao. The red line represent the boundary of AP and PP. The tip of symbol '^' and symbol 'v' point to the parts with lower genes expression and chitin content.