## **Supplemental Figures**

Figure S1.  $\beta$ -1,3-glucan-dependent activation of *Tenebrio* MSP and SAE existing in the crude *Tenebrio* hemolymph. *A*, Western blot analysis of Lys-type PG dependent (lanes 1-6) and  $\beta$ -1,3-glucan dependent (lanes 7-11) *Tenebrio* pro-MSP activation. We used the E1, E2, E3 fractions, which are fractionated from the crude *Tenebrio* hemolymph by heparin column chromatography. *Arrows* represent the positions of the *Tenebrio* pro-MSP and the cleaved catalytic domain of activated MSP. The *Arrow (a)* represents the non-specific band. *B*, Western blot analysis of Lys-type PG-dependent (lanes 1-6) and  $\beta$ -1,3-glucan dependent (lanes 7-11) *Tenebrio* pro-SAE activation. *Arrows* represent the position of the pro-SAE and cleaved catalytic domain of activated SAE.



**Figure S2. The entire amino acid sequence of purified Tenecin 2.** The partial amino acid sequences determined using an Applied Biosystems gas phase automatic amino acid sequencer are shown. The sequenced fragments produced by the lysyl endopeptidase (Lys) and endoproteinase Asp-N (Asp) treatments are shown by bars.



Figure S3. mRNA expression levels of Tenecin 1 in the hemocyte and the fat body at 3, 6, 18 and 48 h after injection of  $\beta$ -1,3-glucan, activated SAE or processed Spätzle. IS means insect saline injection. The mRNA levels of Tenecin 1 were represented at 3, 6, 18 and 48 h after injection of  $\beta$ -1,3-glucan, activated SAE and processed Spätzle, respectively. The relative mRNA levels of Tenecin 1 are normalized based on those of insect saline-injected control samples. T-bars mean  $\pm$  SD (p < 0.05).

