



Supplementary Figure S2. Validation using qRT-PCR for the expression level of the selected seven genes by RNA-seq analysis. The *actin* gene (JPS_TRINITY_DN629_c0_g1) was used as internal control of Japanese pine sawyer. The average results of three replicates RNA samples of the non-treated control Japanese pine sawyer were compared with each results of the fungus-treated JPS. The Rep is replicates of fungus-treated JPS beetle.