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*SUPPLEMENTAL MATERIALS*

# The THO/TREX Complex Active in Alternative Splicing Mediates Plant Responses to Salicylic Acid and Jasmonic Acid

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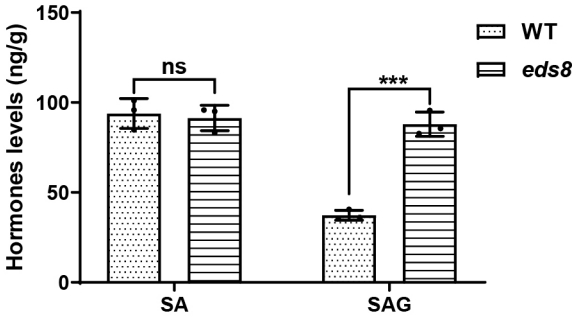


**Figure S1.** The levels of SA and SAG in WT and *eds8* mutant. The third and fourth true leaves of three-week-old plants were collected. The levels of SA and SAG were measured. Significant difference was detected by student *t*-test. Data are shown as mean ± SD (n = 3). ***, $p < 0.001$; ns, no significant difference.

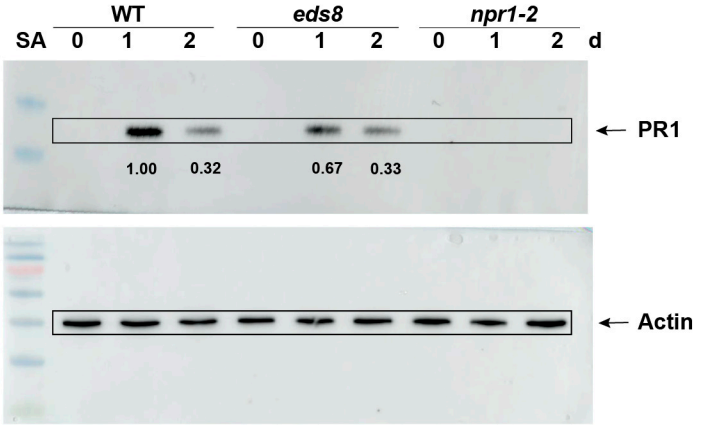


**Figure S2.** The full scan data for protein levels of PR1 in WT, *eds8* and *npr1* mutants after SA treatment.

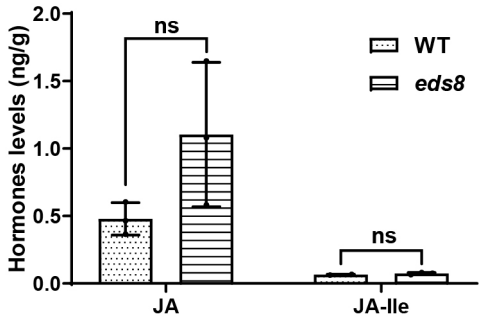


**Figure S3.** The levels of JA and JA-Ile in WT and *eds8* mutant. The third and fourth true leaves of three-week-old plants were collected. The levels of JA-Ile and JA were measured. Significant difference was detected by student *t*-test. Data are shown as mean ± SD (n = 3). ns, no significant difference.

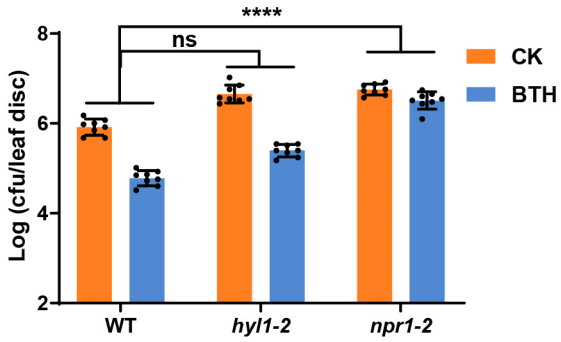


**Figure S4.** The BTH induced defense in WT, *hyl* and *npr1* mutants. Three-week-old plants were sprayed with BTH or CK ($H_2O$) one day before pathogen infiltration ($OD_{600}$ = 0.001), and pathogen growth was determined three days later. Significant difference was detected by two-way ANOVA. Data are shown as mean ± SD (n = 8). The experiment was repeated three times with similar results. ****, $p < 0.0001$; ns, no significant difference.

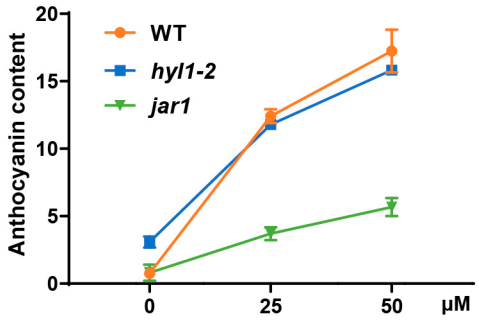


**Figure S5.** The JA induced anthocyanin accumulation assay in WT, *hyl* and *jar1* mutants. Seeds were sowed onto 1/2 MS plates with different concentration of JA, and the anthocyanin accumulation was determined 14 days later. The experiment was repeated three times with similar results.

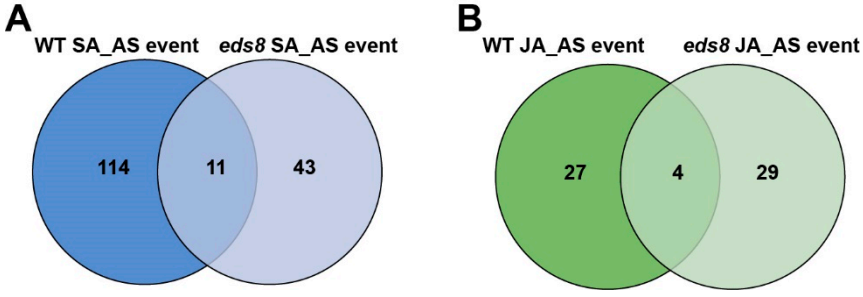


**Figure S6.** EDS8 influences the SA and JA induced changes on alternative splicing (AS) events. The Venn diagrams of different AS events induced by SA (**A**) and JA (**B**) in WT and *eds8* mutant.

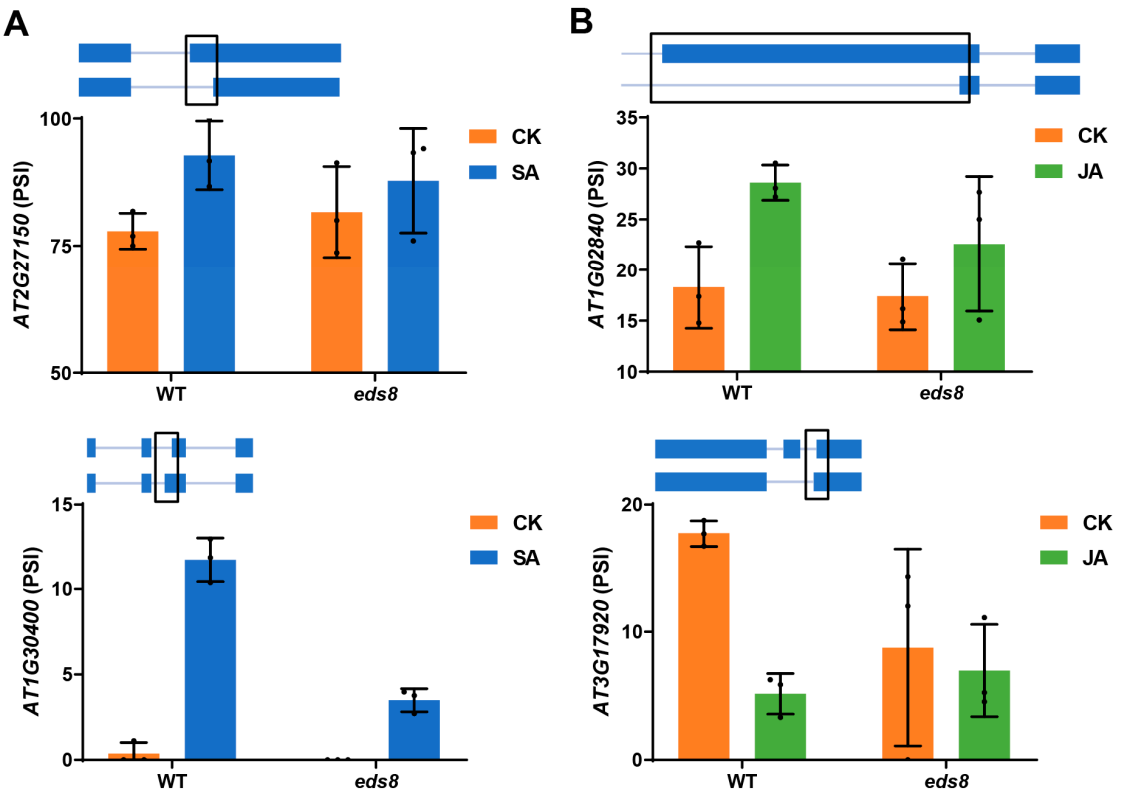


**Figure S7.** Representative EDS8 dependent DAS events regulated by SA and JA. (**A**) Representative EDS8 dependent DAS events (Event Region NC003071.7:11602079-11602429 of *At2g27150* and NC003070.9:10731068-10731226 of *At1g30400*) regulated by SA. (**B**) Representative EDS8 dependent DAS events (Event Region NC003070.9:628470-629287 of *At1g02840* and NC003074.8:6137696-6137982 of *At3g17920*) regulated by JA. Exons are represented as blue boxes, and introns as blue line. PSI, percent spliced in.

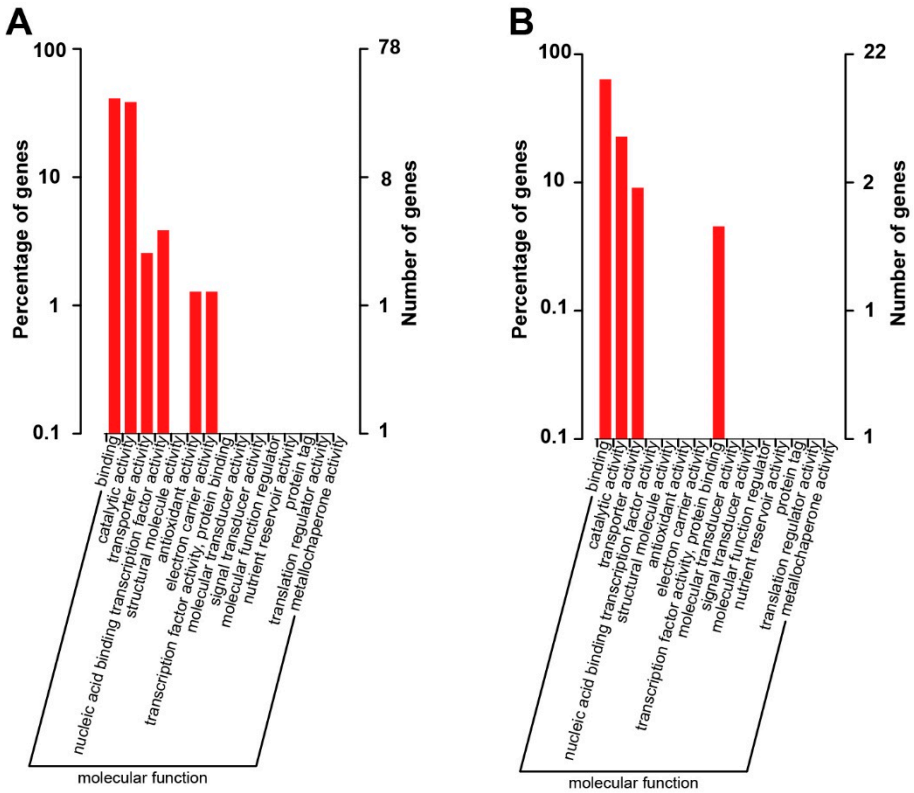

**Figure S8.** Go terms of the EDS8 dependent SA and JA induced DAS genes. (**A**) GO terms of EDS8 dependent SA induced DAS genes. (**B**) GO terms of EDS8 dependent JA induced DAS genes.

**Table S1.** The AS events in different samples used for full length mRNA sequencing.

| AS type / Sample | IR | ES | AD | AA | MEE |
|---|---|---|---|---|---|
| WT CK | 516 | 138 | 171 | 333 | 8 |
| WT SA | 560 | 169 | 202 | 382 | 8 |
| WT JA | 544 | 140 | 171 | 324 | 7 |
| eds8 CK | 555 | 172 | 224 | 364 | 8 |
| eds8 SA | 652 | 219 | 270 | 417 | 11 |
| eds8 JA | 538 | 166 | 199 | 359 | 8 |

**Table S2.** The primers used in this study.

| Primer | Sequence (5'-3') |
|---|---|
| *UBQ5qPCRFw* | GTAAACGTAGGTGAGTCC |
| *UBQ5qPCRRev* | GACGCTTCATCTCGTCC |
| *PR1qPCRFw* | CTCATACACTCTGGTGGG |
| *PR1qPCRRev* | TTGGCACATCCGAGTC |
| *PDF1.2qPCRFw* | TTGCTGCTTTCGACGCA |
| *PDF1.2qPCRRev* | TGTCCCACTTGGCTTCTCG |
| *AtActin2-1Fw* | GGCGATGAAGCTCAATCCAAACG |
| *AtActin2-1Rev* | GGTCACGACCAGCAAGATCAAGACG |
| *BcActin-1Fw* | TCCAAGCGTGGTATTCTTACCC |
| *BcActin-1Rev* | TGGTGCTACACGAAGTTCGTTG |