

Figure S1. (A) KEGG pathway enrichment analysis of DEGs and genes subjected to DAS events in Group 1 and Group 4. (B) Overlapping GO pathways between DEGs and genes subjected to DAS events in the cellular component category. Group 1 represents H₂O shoots vs. H₂O roots; Group 2 represents Pb roots vs. H₂O roots; Group 3 represents Pb shoots vs. H₂O shoots; and Group 4 represents Pb shoots vs. Pb roots.

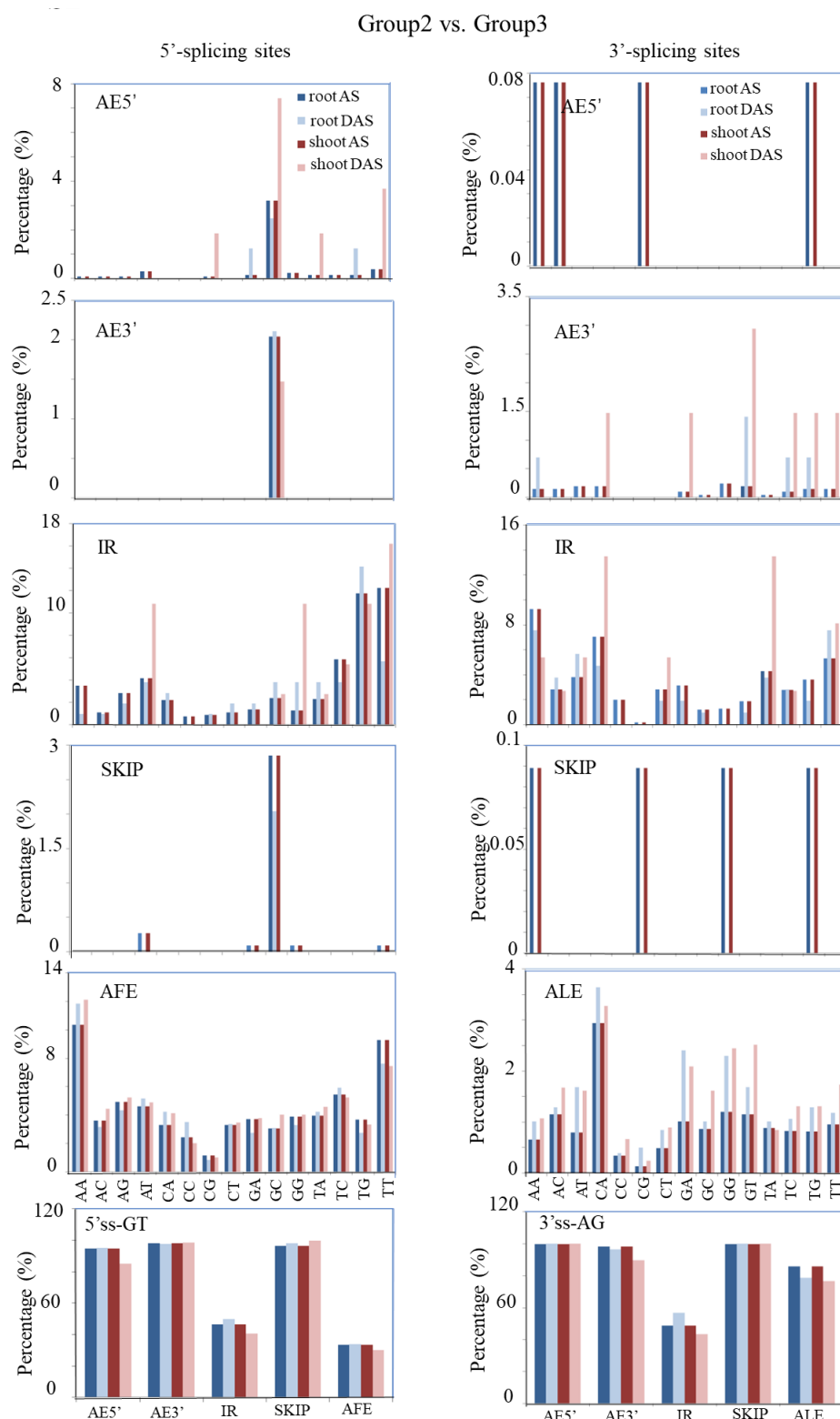


Figure S2. Frequency of traditional and nonconventional splice site selection in specific splicing events in Group 2 and Group 3 members between the shoots and roots. Group 1 represents H₂O shoots vs. H₂O roots; Group 2 represents Pb roots vs. H₂O roots; Group 3 represents Pb shoots vs. H₂O shoots; and Group 4 represents Pb shoots vs. Pb roots.

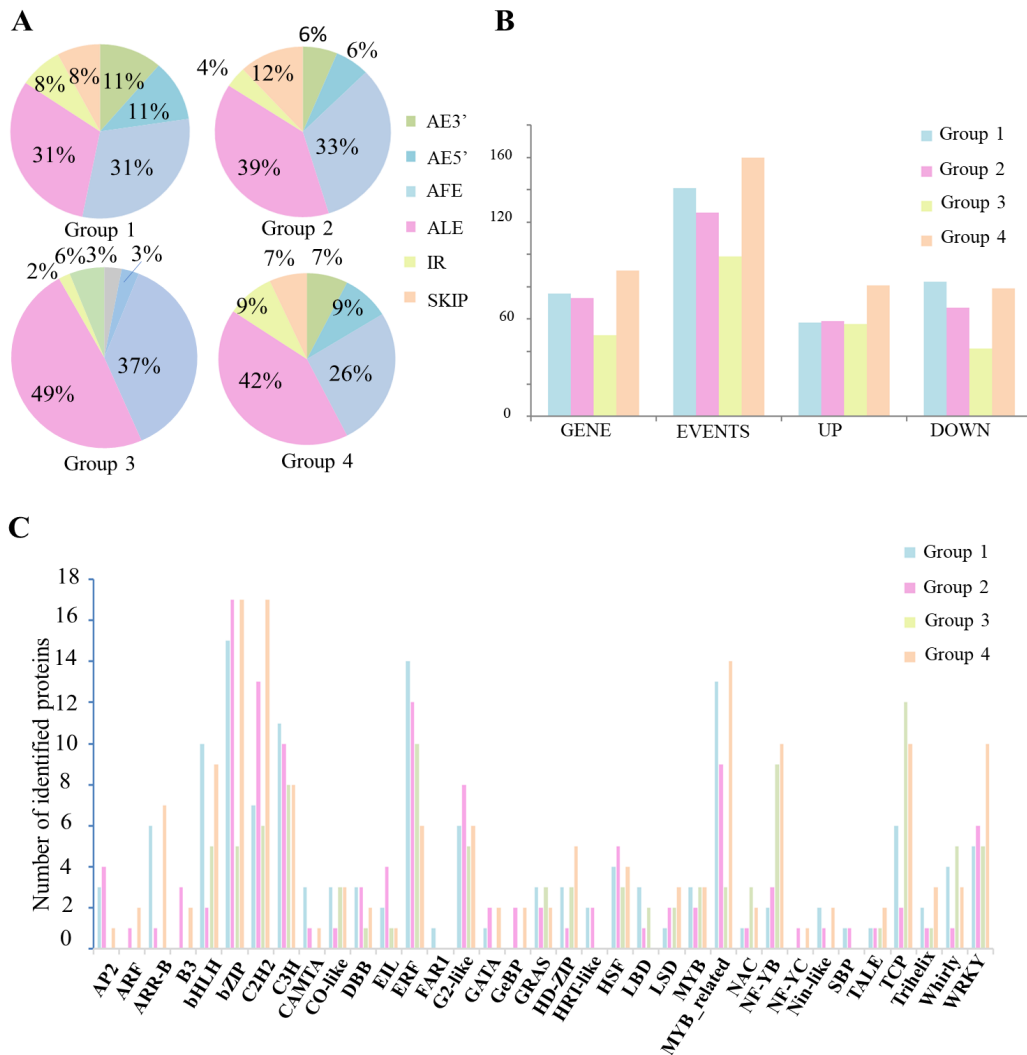


Figure S3. Splicing event statistics and groups of TFs. (A) Proportion of splicing events in each compared group. (B) Number of identified proteins in each TF family. (C) Numbers of genes, events, increased events and decreased events. Group 1 represents H₂O shoots vs. H₂O roots; Group 2 represents Pb roots vs. H₂O roots; Group 3 represents Pb shoots vs. H₂O shoots; and Group 4 represents Pb shoots vs. Pb roots.

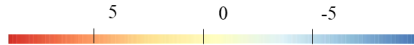
A

Pb shoot vs. H₂O shoot SF DAS

Potri.014G129100 AFE 1.1	Potri.008G039100 AFE 4.5
Potri.008G039100 AFE 4.5	Potri.015G086500 ALE 5.2
Potri.008G039100 AFE 4.5	Potri.014G129100 AFE 1.1
Potri.008G039100 AFE 4.5	Potri.014G129100 AFE 1.1
Potri.009G116400 ALE 3.2	Potri.018G028600 ALE 2.6
Potri.005G240200 ALE 5.1	Potri.010G012800 ALE 2.4
Potri.005G240200 AFE 5.1	Potri.008G168000 ALE 1.2
Potri.005G045600 SKIP 5.2	Potri.008G168000 ALE 1.2
Potri.005G045600 SKIP 5.2	Potri.018G028600 ALE 2.6
Potri.005G194700 AFE 2.1	Potri.006G231800 ALE 5.1
Potri.006G015700 ALE 3.3	Potri.006G146400 AFE 4.1
Potri.012G045800 AFE 1.4	Potri.003G130301 ALE 5.1
Potri.018G009100 AFE 2.2	Potri.014G104500 ALE 3.4
Potri.015G092100 ALE 4.5	Potri.016G023800 AFE 3.3
Potri.003G023800 ALE 2.2	Potri.016G023800 ALE 3.3
Potri.004G177000 AE3' 4.5	Potri.001G269900 ALE 4.5
Potri.003G023800 ALE 2.2	Potri.004G186600 AE3' 2.4
Potri.003G014900 AFE 1.1	Potri.004G186600 ALE 2.4
Potri.012G045800 AFE 1.4	Potri.018G091300 ALE 1.6
Potri.001G440100 ALE 1.1	Potri.009G053200 ALE 3.4
Potri.004G211600 AFE 4.5	Potri.018G009100 AFE 2.2
Potri.001G440100 ALE 1.1	Potri.004G211600 AFE 4.5
Potri.014G049700 ALE 2.6	Potri.018G009100 AFE 2.2
Potri.003G038300 ALE 4.3	Potri.018G009100 AFE 2.2
Potri.018G028600 AE3' 2.6	Potri.003G014900 AFE 1.1
Potri.009G053200 ALE 3.4	Potri.009G053200 ALE 3.4
Potri.008G147100 AFE 1.2	Potri.008G147100 IR 1.2
Potri.003G014900 AFE 1.1	Potri.008G147100 SKIP 1.2
Potri.003G058400 ALE 1.2	Potri.008G147100 AE3' 1.2
Potri.010G178700 AFE 1.1	Potri.003G014900 AFE 1.1
Potri.010G178700 AE3' 1.1	Potri.005G194700 AFE 2.1
Potri.004G211600 ALE 4.5	Potri.001G281300 ALE 5.2
Potri.004G211600 AFE 4.5	Potri.014G129100 AFE 1.1
Potri.010G012800 ALE 2.4	Potri.001G207100 ALE 3.4
Potri.003G058400 ALE 1.2	Potri.004G186600 AFE 2.4
Potri.010G178700 AFE 1.1	Potri.001G207100 ALE 3.4
Potri.014G049700 ALE 3.4	Potri.004G186600 AE3' 2.4
Potri.018G028600 AE3' 2.6	Potri.014G049700 ALE 2.6
Potri.003G109000 IR 1.2	Potri.001G207100 ALE 3.4
Potri.015G057400 ALE 3.2	Potri.006G2353100 AFE 2.6
Potri.001G281300 ALE 5.2	Potri.002G138300 AFE 3.5
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Potri.012G094600 AFE 4.5	Potri.004G186600 AFE 2.4
Potri.012G094600 IR 4.5	Potri.010G178700 AFE 1.1
Potri.005G258000 AFE 2.2	Potri.015G057400 ALE 3.2
Potri.005G258000 ALE 2.1	Potri.010G178700 AFE 1.1
Potri.009G163400 AE3' 3.4	Potri.003G058400 ALE 1.2
Potri.009G163400 IR 3.4	Potri.010G070500 AFE 1.2
Potri.009G163400 SKIP 3.4	Potri.003G058400 ALE 1.2
Potri.006G163700 ALE 2.4	Potri.009G099300 ALE 4.2
Potri.018G009100 AFE 2.2	Potri.006G253100 AFE 2.6
Potri.018G009100 ALE 2.2	Potri.006G127200 ALE 5.2
Potri.002G138300 AFE 3.5	Potri.008G170400 ALE 3.3
Potri.001G207100 ALE 3.4	Potri.015G057400 ALE 3.2
Potri.016G023800 ALE 3.3	Potri.010G178700 AFE 1.1
Potri.009G064600 AE3' 4.5	Potri.016G023800 ALE 3.3
Potri.015G057400 ALE 3.2	Potri.009G051000 ALE 2.6
Potri.015G057400 ALE 3.2	Potri.014G049700 ALE 2.6
Potri.009G051000 ALE 2.6	Potri.009G051000 ALE 2.6
Potri.018G028600 ALE 2.6	Potri.012G045800 AFE 1.4
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Potri.016G023800 ALE 3.3	
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Potri.014G129100 AFE 1.1	
Potri.009G116400 ALE 3.2	
Potri.014G049700 ALE 2.6	
Potri.001G236900 ALE 2.6	
Potri.001G207100 ALE 3.4	
Potri.003G218600 ALE 2.2	
Potri.007G065700 ALE 1.4	
Potri.001G207100 ALE 3.4	
Potri.007G086900 AFE 4.5	
Potri.001G207100 IR 3.4	
Potri.015G085700 MSKIP 3.1	
Potri.015G085700 MIR 3.1	
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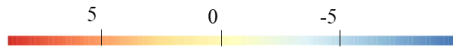
Pb shoot vs. H₂O shoot TF DAS

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Potri.009G068000 AFE HSF	Potri.018G058600 AFE C3H
Potri.011G123300 ALE NAC	Potri.018G058600 ALE C3H
Potri.009G087000 SKIP MYB_R	Potri.019G099900 AE3' NAC
Potri.007G097100 AFE HD-ZIP	Potri.003G090300 AFE LSD
Potri.003G071700 IR ERF	Potri.010G092500 ALE Whirly
Potri.003G071700 AE3' ERF	Potri.001G397200 ALE ERF
Potri.009G087000 SKIP MYB_R	Potri.002G195300 AFE WRKY
Potri.018G013800 AFE CO-like	Potri.008G120100 AFE ERF
Potri.004G065800 AFE TCP	Potri.009G134900 ALE bZIP
Potri.007G028800 ALE C2H2	Potri.009G017400 AFE TALE
Potri.008G044800 AFE NF-YB	Potri.001G327100 ALE TCP
Potri.001G367500 ALE NF-YB	Potri.004G116100 AFE TCP
Potri.001G367500 AFE NF-YB	Potri.004G116100 ALE TCP
Potri.014G167800 AFE NF-YB	Potri.001G416600 ALE bHLH
Potri.014G167800 ALE NF-YB	Potri.001G367500 AFE NF-YB
Potri.002G048000 ALE C2H2	Potri.001G367500 AFE NF-YB
Potri.006G138800 ALE ERF	Potri.002G048000 ALE C2H2
Potri.006G138800 AFE ERF	Potri.008G120400 ALE CO-like
Potri.006G101400 ALE Trihelix	Potri.010G092500 ALE Whirly
Potri.014G025100 AFE C2H2	Potri.002G073400 AFE GRAS
Potri.014G025100 ALE C2H2	Potri.009G134900 ALE bZIP
Potri.005G158100 AFE bHLH	Potri.009G134900 ALE bZIP
Potri.018G109500 AFE bHLH	Potri.009G134900 AFE bZIP
Potri.001G367500 AFE NF-YB	Potri.009G042600 AFE MYB
Potri.001G367500 ALE NF-YB	Potri.011G123300 ALE NAC family
Potri.009G134900 ALE bZIP	Potri.001G044500 ALE WRKY
Potri.001G397200 ALE ERF	Potri.004G140600 SKIP bZIP
Potri.001G397200 AFE ERF	Potri.007G043800 ALE HSF
Potri.010G092500 ALE Whirly	Potri.004G065800 AFE TCP
Potri.010G092500 AFE Whirly	Potri.013G001300 AE3' bHLH
Potri.010G092500 ALE Whirly	Potri.004G065800 AFE TCP
Potri.004G116100 ALE TCP	Potri.014G141400 ALE HSF
Potri.002G073400 AFE GRAS	Potri.004G100100 AFE LBD
Potri.016G048000 IR G2-like	Potri.004G100100 ALE LBD
Potri.016G048000 AE3' G2-like	Potri.010G187900 ALE C3H
Potri.006G234300 AFE C3H	Potri.016G001100 AE3' G2-like
Potri.006G234300 ALE C3H	Potri.016G001100 SKIP G2-like
Potri.017G128900 ALE MYB	Potri.016G001100 AE3' G2-like
Potri.004G065800 AFE TCP	Potri.001G044500 ALE WRKY
Potri.002G065600 ALE ERF	Potri.008G120100 AFE ERF
Potri.009G134900 ALE bZIP	Potri.006G234300 AFE C3H
Potri.017G128900 ALE MYB	Potri.006G234300 ALE C3H
Potri.007G015200 ALE DBB	
Potri.004G116100 AFE TCP	
Potri.001G416600 ALE bHLH	
Potri.011G154800 ALE LSD	
Potri.004G116100 ALE TCP	
Potri.007G097100 AFE HD-ZIP	
Potri.002G073400 AFE GRAS	
Potri.010G187900 ALE C3H	
Potri.007G097100 ALE HD-ZIP	
Potri.009G149400 ALE C2H2	
Potri.012G073900 AFE MYB_R	
Potri.001G327100 ALE TCP	
Potri.001G044500 AFE WRKY	
Potri.001G327100 ALE TCP	



Pb root vs. H₂O root SF DAS

Potri.008G039100 AFE 4.5	Potri.016G023800 ALE 2.6
Potri.008G039100 AFE 4.5	Potri.001G207100 ALE 2.6
Potri.008G039100 ALE 4.5	Potri.004G177000 AE3' 1.2
Potri.014G129100 AFE 1.2	Potri.001G248100 ALE 3.4
Potri.014G049700 ALE 1.1	Potri.006G163700 ALE 2.8
Potri.006G127200 AE5' 2.6	Potri.001G207100 ALE 3.3
Potri.007G026900 ALE 2.4	Potri.001G207100 ALE 3.4
Potri.005G240200 AFE 5.2	Potri.016G023800 ALE 2.3
Potri.005G240200 ALE 2.4	Potri.016G023800 ALE 3.1
Potri.001G236900 ALE 3.4	Potri.015G135800 ALE 4.5
Potri.014G049700 ALE 3.3	Potri.010G012800 ALE 4.5
Potri.004G186600 AFE 2.6	Potri.001G269900 ALE 2.4
Potri.001G207100 ALE 2.4	Potri.003G218600 ALE 5.1
Potri.001G207100 ALE 3.4	Potri.005G258000 AFE 2.2
Potri.014G129100 AFE 3.4	Potri.005G258000 ALE 2.1
Potri.001G207100 ALE 1.1	Potri.012G061600 ALE 5.2
Potri.002G192500 ALE 3.3	Potri.001G281300 ALE 5.1
Potri.004G186600 AFE 3.3	Potri.007G086900 AFE 2.6
Potri.004G186600 ALE 2.4	Potri.010G178700 AFE 4.5
Potri.016G023800 ALE 2.4	Potri.007G065700 AFE 1.1
Potri.016G023800 ALE 3.3	Potri.006G163700 ALE 2.4
Potri.007G026900 ALE 3.4	Potri.010G178700 AFE 2.4
Potri.016G023800 ALE 4.5	Potri.001G248100 ALE 2.4
Potri.003G081600 ALE 2.2	Potri.012G061600 ALE 4.5
Potri.018G009100 AFE 3.5	Potri.001G281300 ALE 3.2
Potri.012G094600 IR 3.1	Potri.001G166100 ALE 1.2
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Potri.015G085700 MIR 3.1	Potri.002G003000 AFE 3.5
Potri.014G104500 ALE 4.5	Potri.002G003000 ALE 2.1
Potri.010G012800 ALE 3.4	Potri.001G281300 AFE 2.1
Potri.004G177000 AE3' 3.3	Potri.006G015700 ALE 1.2
Potri.006G163700 ALE 2.2	Potri.003G058400 ALE 3.2
Potri.003G130301 ALE 2.4	Potri.010G178700 AFE 5.2
Potri.009G051000 ALE 2.4	Potri.012G061600 ALE 1.1
Potri.010G178700 AFE 1.1	Potri.012G061600 AFE 2.2
Potri.010G012800 ALE 1.1	Potri.004G177000 ALE 2.2
Potri.010G012800 ALE 4.5	Potri.018G009100 ALE 4.3
Potri.010G178700 AFE 2.8	Potri.018G009100 AFE 2.2
Potri.009G124200 ALE 5.2	Potri.004G224000 SKIP 4.3
Potri.018G028600 AFE 5.2	Potri.004G224000 SKIP 3.2
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Potri.003G058400 ALE 2.2	Potri.004G211600 AFE 4.5
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Potri.010G178700 AFE 1.1	Potri.005G045600 SKIP 1.2
Potri.015G057400 ALE 1.1	Potri.005G045600 SKIP 5.2
Potri.014G161600 AFE 2.6	Potri.010G056900 ALE 1.1
Potri.008G039100 ALE 4.5	Potri.002G139700 ALE 4.5
Potri.010G056900 ALE 2.6	Potri.001G166600 ALE 1.2
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Potri.009G036900 ALE 3.4	Potri.009G053200 ALE 2.6
Potri.008G168000 AFE 1.2	Potri.009G053200 ALE 2.2
Potri.003G014900 AFE 1.1	Potri.012G045800 ALE 4.5
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Potri.005G165400 ALE 2.2	Potri.006G118700 ALE 2.2
Potri.003G014900 AFE 5.2	Potri.015G057400 ALE 1.1
Potri.010G067500 ALE 1.1	Potri.014G129100 AFE 1.4
Potri.001G281300 ALE 2.1	Potri.018G009100 AFE 3.3
Potri.002G003000 ALE 3.2	Potri.018G028600 AFE 2.2
Potri.002G003000 AFE 2.1	Potri.018G009100 AFE 3.5
Potri.001G166600 ALE 4.5	Potri.012G045800 AFE 1.4
Potri.006G015700 ALE 3.2	Potri.012G045800 ALE 1.2
Potri.015G057400 ALE 3.3	Potri.012G045800 AFE 1.4
Potri.003G023800 ALE 1.4	Potri.008G039100 AFE 4.5
Potri.012G045800 ALE 2.6	Potri.014G049700 ALE 5.1
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Potri.012G045800 ALE 2.6	Potri.005G240200 ALE 5.1
Potri.004G039000 ALE 1.1	Potri.014G049700 ALE 4.5
Potri.003G023800 ALE 2.2	Potri.005G240200 ALE 2.6
Potri.018G009100 AFE 1.4	Potri.005G240200 AFE 5.1
Potri.006G139300 ALE 2.2	Potri.008G039100 ALE 1.4
Potri.012G094600 IR 1.1	Potri.012G094600 IR 1.1
Potri.015G085700 SKIP 3.1	Potri.007G072700 ALE 4.5
Potri.015G085700 MSKIP 2.4	Potri.008G039100 ALE 4.5
Potri.015G085700 MIR 3.1	Potri.008G039100 AFE 4.5
Potri.001G208200 AE3' 4.5	Potri.008G039100 ALE 4.5
Potri.005G045600 SKIP 1.4	Potri.008G039100 ALE 4.5
Potri.005G045600 SKIP 5.2	Potri.008G039100 ALE 4.5
Potri.005G124300 IR 3.4	Potri.009G064600 AE5' 4.5
Potri.005G124300 IR 1.2	
Potri.012G045800 AFE 1.4	
Potri.003G130301 IR 3.2	
Potri.007G070700 IR 1.2	
Potri.007G070700 SKIP 1.2	
Potri.007G070700 MIR 1.2	
Potri.007G070700 IR 2.2	
Potri.007G070700 AE5' 1.2	



Pb root vs. H₂O root TF DAS

Potri.010G006800 ALE ERF	Potri.001G228500 SKIP G2-like
Potri.018G058600 AFE C3H	Potri.001G228500 SKIP G2-like
Potri.018G058600 ALE C3H	Potri.009G068000 AFE bZIP
Potri.003G071700 IR ERF	Potri.001G151700 ALE GATA
Potri.003G071700 AE5' ERF	Potri.006G058800 AFE bZIP
Potri.013G153400 ALE WRKY	Potri.010G092500 ALE Whirly
Potri.014G120800 AFE bZIP	Potri.005G234500 AFE DBB
Potri.014G120800 ALE bZIP	Potri.001G397200 AFE ERF
Potri.014G028200 ALE bZIP	Potri.001G397200 ALE ERF
Potri.001G404100 AFE NAC	Potri.001G397200 AFE ERF
Potri.008G120400 ALE CO-like	Potri.001G397200 ALE ERF
Potri.003G001000 ALE ARF	Potri.014G028200 ALE bZIP
Potri.006G226800 AE5' HSF	Potri.004G065800 AFE TCP
Potri.009G106600 AFE G2-like	Potri.006G150000 ALE HRT-like
Potri.001G077900 AFE bZIP	Potri.007G039400 AFE G2-like
Potri.004G175200 ALE bZIP	Potri.007G028800 ALE C2H2
Potri.001G060000 ALE TCP	Potri.001G044500 AFE WRKY
Potri.015G137200 ALE C3H	Potri.006G150000 ALE HRT-like
Potri.009G120800 AFE TALE	Potri.006G277800 AFE bZIP
Potri.001G367500 ALE NF-YB	Potri.007G076200 AFE MYB
Potri.001G367500 AFE NF-YB	Potri.009G159200 SKIP EIL
Potri.006G058800 AFE bZIP	Potri.007G090600 ALE ERF
Potri.004G043100 ALE LSD	Potri.007G090600 AFE ERF
Potri.013G025000 ALE NF-YC	Potri.004G221700 MIR C2H2
Potri.008G069400 AFE C3H	Potri.005G082000 SKIP bZIP
Potri.006G101400 ALE Trihelix	Potri.005G082000 AE3' bZIP
Potri.001G015900 ALE EIL	Potri.005G234500 ALE DBB
Potri.004G217100 ALE C2H2	Potri.006G227600 AFE C2H2
Potri.004G217100 AFE C2H2	Potri.005G234500 AFE DBB
Potri.018G109500 AFE bHLH	Potri.004G217100 AFE C2H2
Potri.001G146200 ALE G2-like	Potri.004G217100 ALE C2H2
Potri.014G141400 ALE HSF	Potri.004G217100 ALE C2H2
Potri.010G141700 AE3' CAMTA	Potri.007G090600 AFE ERF
Potri.008G044800 AFE NF-YB	Potri.007G090600 AFE ERF
Potri.009G088400 AFE GeBP	Potri.006G234300 AFE C3H
Potri.009G088400 ALE GeBP	Potri.006G234300 ALE C3H
Potri.001G044500 ALE WRKY	Potri.010G068000 ALE ERF
Potri.001G077900 ALE bZIP	Potri.006G234300 ALE C3H
Potri.004G217100 ALE C2H2	Potri.006G234300 AFE C3H
Potri.004G217100 AFE C2H2	Potri.001G044500 ALE WRKY
Potri.001G416600 ALE bHLH	Potri.018G091600 ALE AP2
Potri.003G174800 ALE GATA	Potri.004G197400 AFE EIL
Potri.012G073900 AFE MYB_R	Potri.004G197400 AFE EIL
Potri.002G193000 ALE WRKY	Potri.002G073400 AFE GRAS
Potri.011G154800 ALE LSD	Potri.018G058600 ALE C3H
Potri.009G068000 AFE HSF	Potri.018G058600 AFE C3H
Potri.009G149400 ALE C2H2	Potri.007G097100 AFE HD-ZIP
Potri.001G077900 ALE bZIP	Potri.002G073400 AFE GRAS
Potri.009G068000 AFE HSF	Potri.016G001100 SKIP G2-like
Potri.003G010700 ALE B3	Potri.016G001100 AE3' G2-like
Potri.003G010700 AFE B3	Potri.009G032000 SKIP MYB_R
	Potri.009G032000 AE3' MYB_R
	Potri.002G056700 SKIP G2-like
	Potri.002G056700 AE3' G2-like
	Potri.001G328000 SKIP WRKY
	Potri.019G050900 AFE MYB
	Potri.002G018400 IR bZIP
	Potri.005G082000 SKIP bZIP
	Potri.005G082000 AE5' bZIP
	Potri.014G106800 AE5' MYB_R
	Potri.014G106800 AE5' MYB_R
	Potri.014G106800 AE5' MYB_R
	Potri.014G106800 SKIP MYB_R
	Potri.014G106800 SKIP MYB_R
	Potri.014G106800 IR MYB_R
	Potri.006G132400 SKIP AP2
	Potri.006G132400 AE3' AP2
	Potri.002G188700 IR SBP
	Potri.006G132400 SKIP AP2
	Potri.004G146900 SKIP B3
	Potri.006G227600 AE5' C2H2
	Potri.004G203400 AE5' bZIP
	Potri.001G293300 AE3' Nin-like
	Potri.006G227600 SKIP C2H2
	Potri.007G039500 AE3' LBD

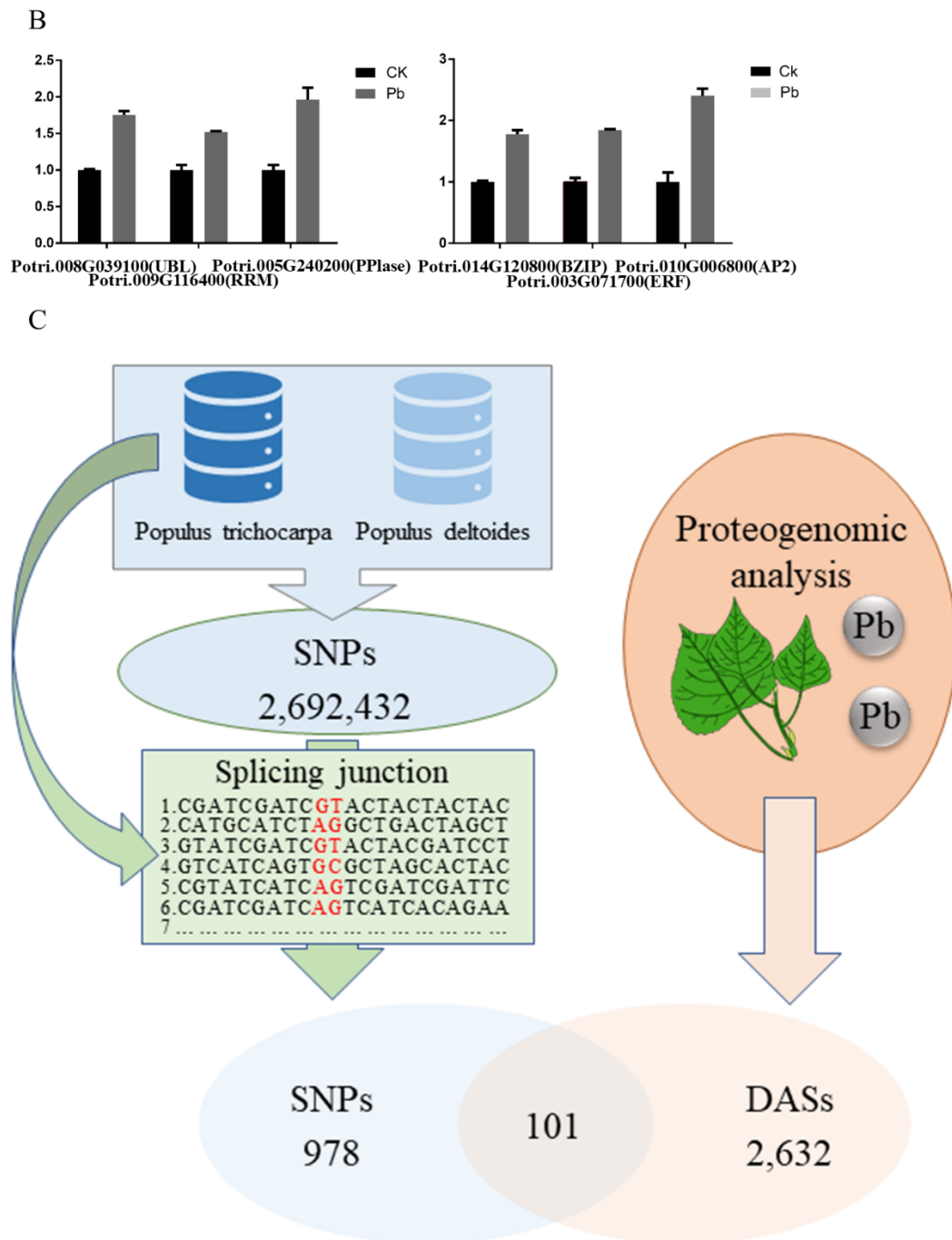
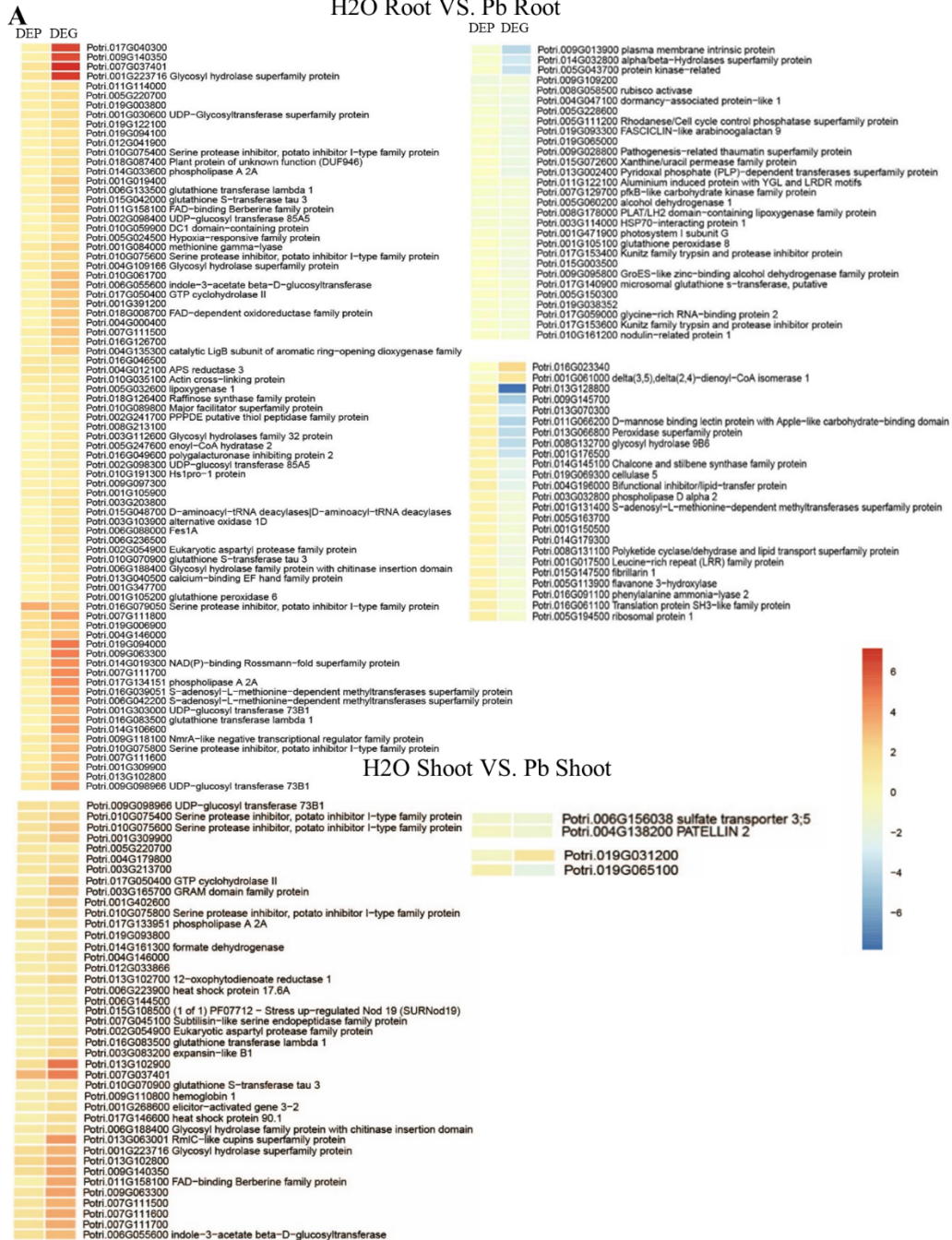
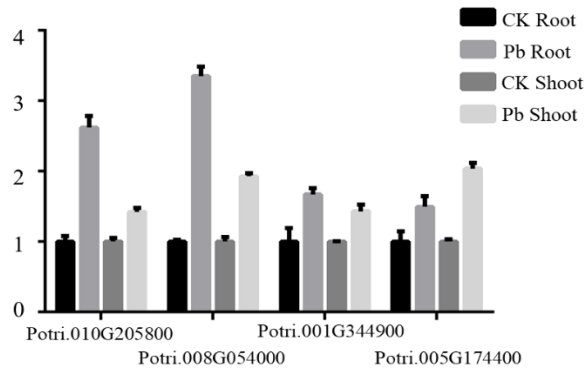


Figure S4. (A) Heatmap showing the expression levels of SF- and TF-encoding genes subjected to DAS events in Group 2 and Group 3. (B) RT-qPCR validation of the WRKY gene. (C) The process of SNP identification.



B

(1)

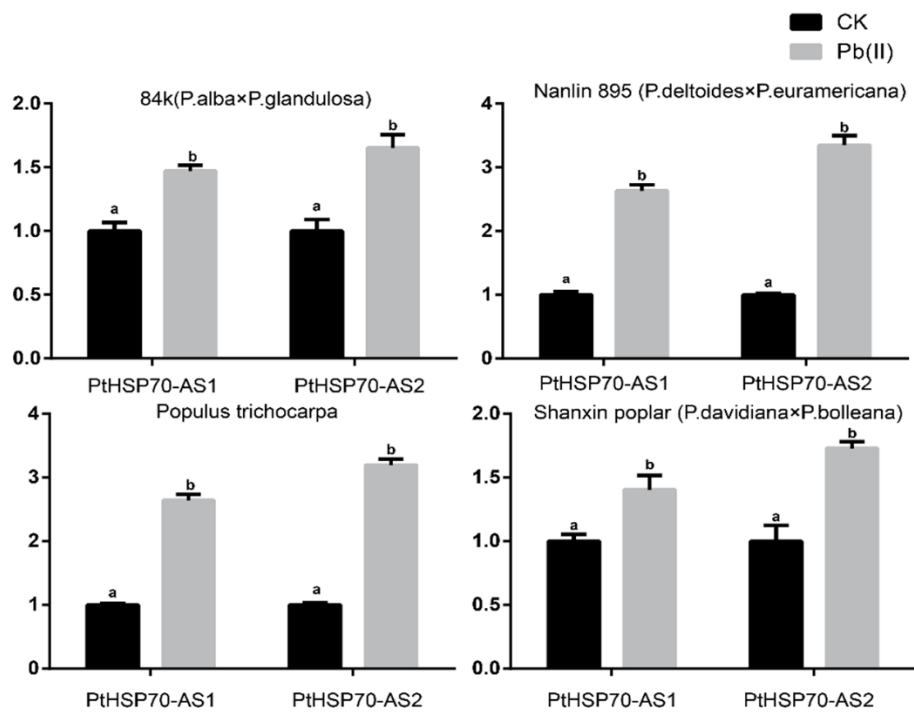
C

Figure S5. Correlation analysis of DEGs and DEPs. (A) Heatmaps of DEP and DEG correlations. (B) RT-qPCR validation of DEGs. (C) The expression of PtHSP70 under Pb resistance among 4 poplar species.

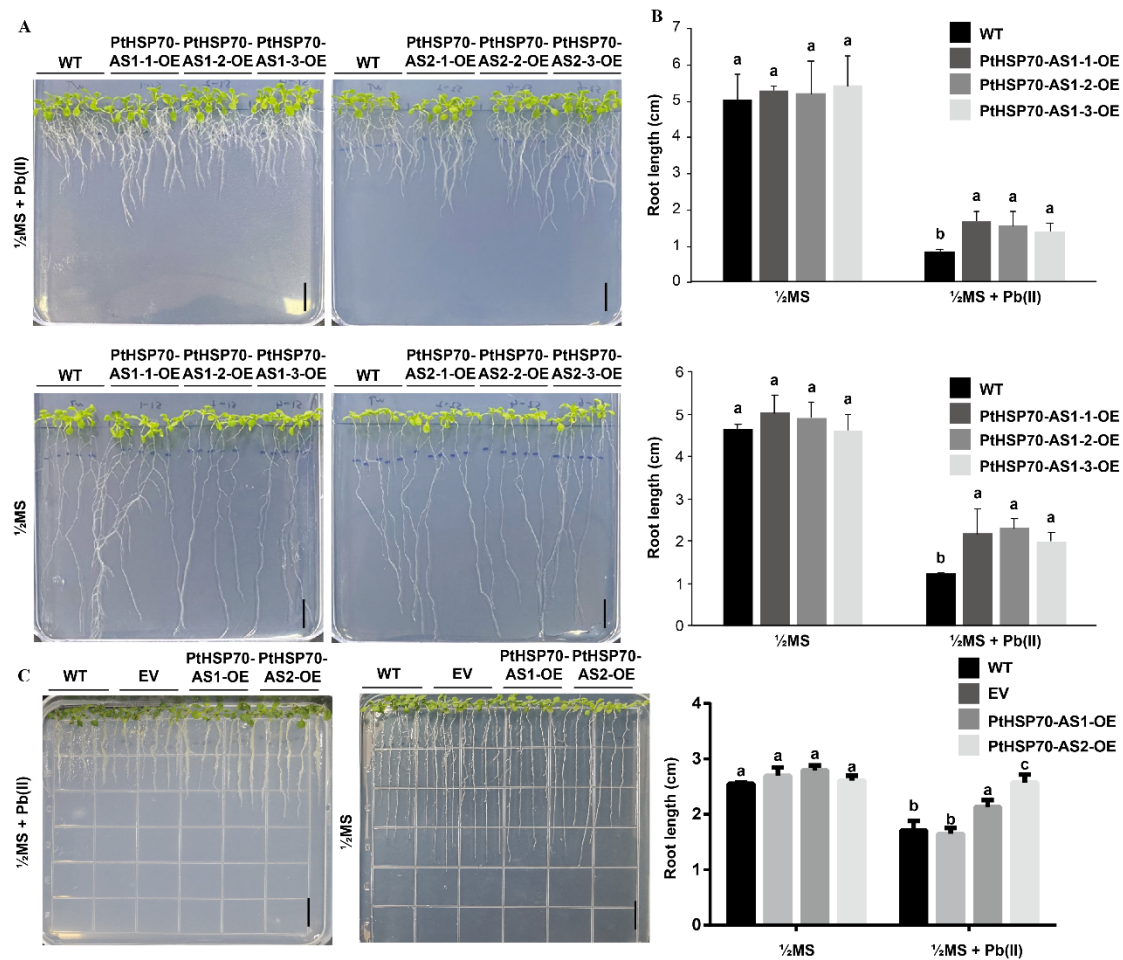
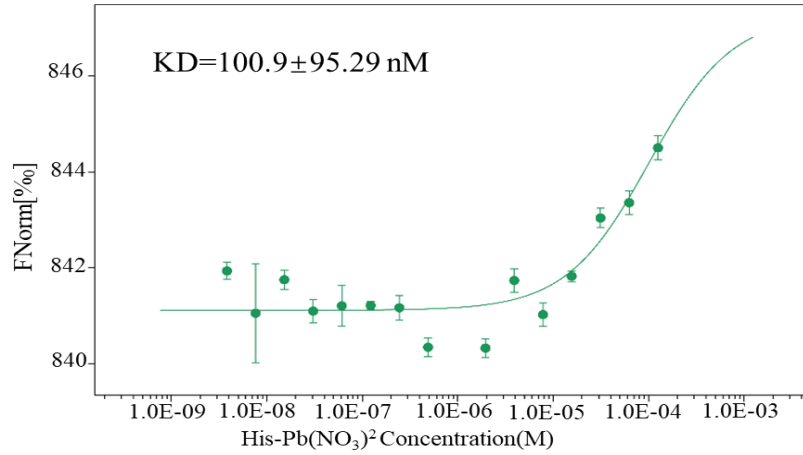


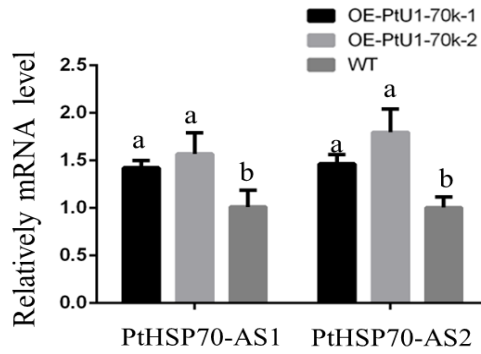
Figure S6. Phenotypic analysis of transgenic Arabidopsis overexpressing PtHSP70-AS1 and PtHSP70-AS2. (A, B and C) Phenotypic analysis of transgenic Arabidopsis overexpressing PtHSP70-AS1 and PtHSP70-AS2 and EV with and without Pb treatment. (A) Phenotype of transgenic Arabidopsis overexpressing PtHSP70-AS1 and PtHSP70-AS2. Scale bars denote 1 cm (B) Root length of transgenic Arabidopsis overexpressing PtHSP70-AS1 and PtHSP70-AS2. Values represent mean \pm SD (n = 10). Asterisks represent significant differences WT and transgenic lines (ANOVA, $P < 0.05$). (C) Phenotype of transgenic Arabidopsis of EV and the root length of them.

CK, control sample grown the absence of Pb; Pb, sample grown in the presence of Pb; WT, wild type; PtHSP70-AS1-1–3, transgenic Arabidopsis overexpressing PtHSP70-AS1 line 1–3; PtHSP70-AS2-1–3, transgenic Arabidopsis overexpressing PtHSP70-AS2 line 1–3.

A



B



C

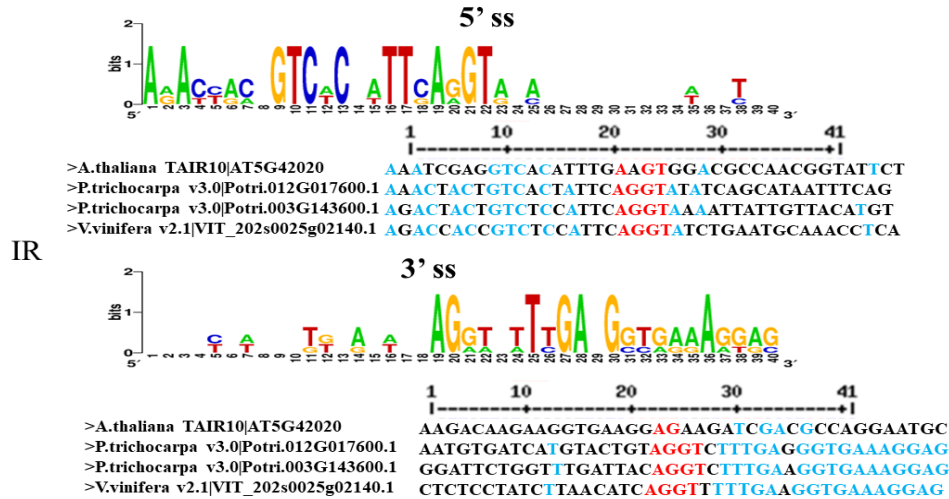


Figure S7. (A) Results of the MST binding assay used to determine the Kd value for the binding of His proteins to Pb(II). (B) Results of the RT-qPCR validation of the expression of PtHSP70.1/PtHSP70.2 in transgenic poplar lines overexpressing PtU1-70k. (C) Analysis of conserved AS site sequences (IR events) in plant HSP70 genes. The flanking sequences (20 bp on each side, as indicated by coloured arrows in Figure 7(A)) of plant HSP70 genes were analysed to determine their consensus sequences

using WebLogo and multiple alignment.

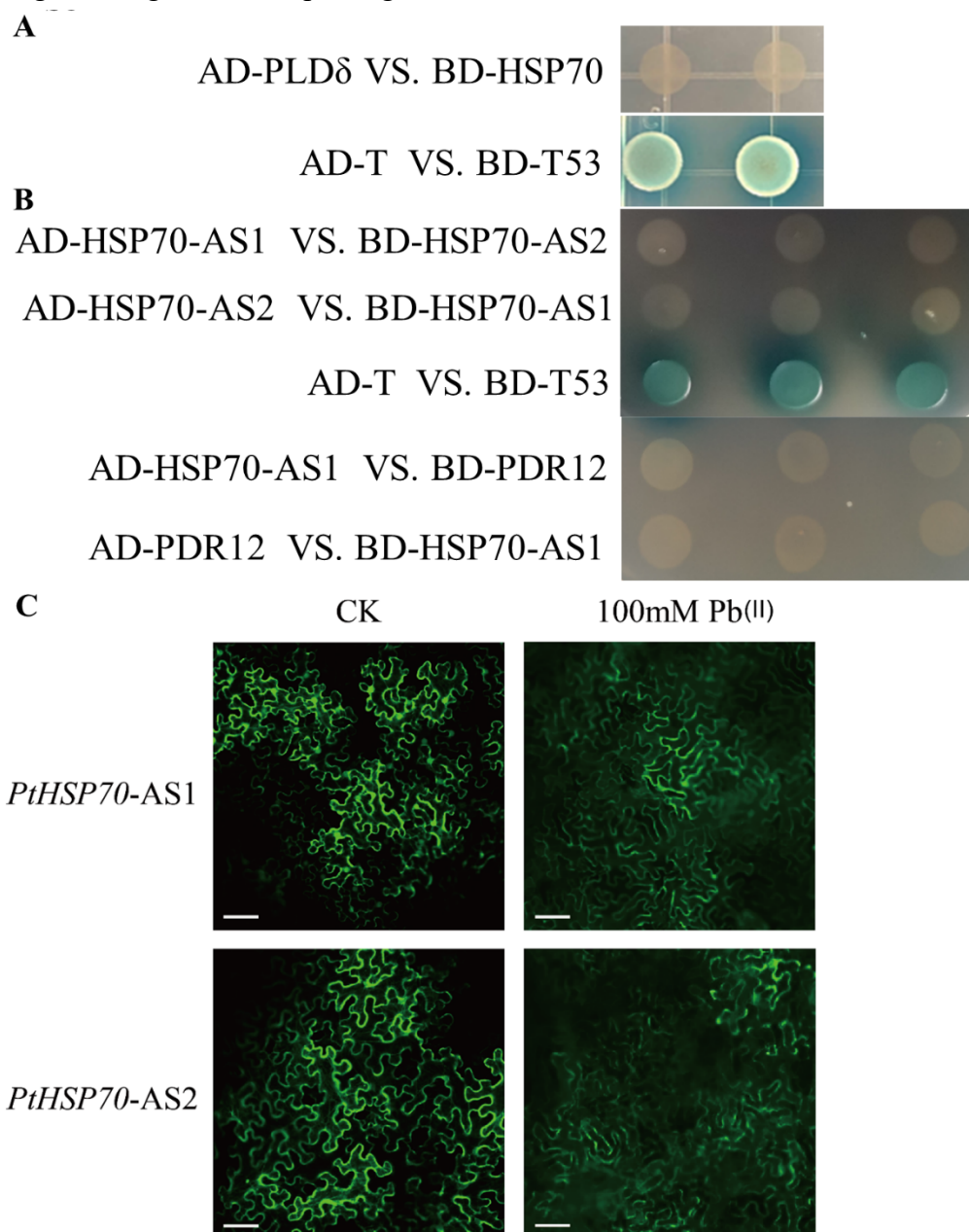


Figure S8. Analysis of the interactions via a Y2H assay and subcellular localization of PtHSP70. (A) The interaction between PtHSP70 and PtPLD δ (B) The interaction between HSP70-AS1 and HSP70-AS2 and HSP70 with PDR12. Plasmids were cotransfected into yeast cells and selected on SD-Leu/-Trp and SD-Leu/-Trp/-His/-Ade media. T and T53 were used as positive controls. (C) The subcellular localization of PtHSP70 with and without Pb(II).

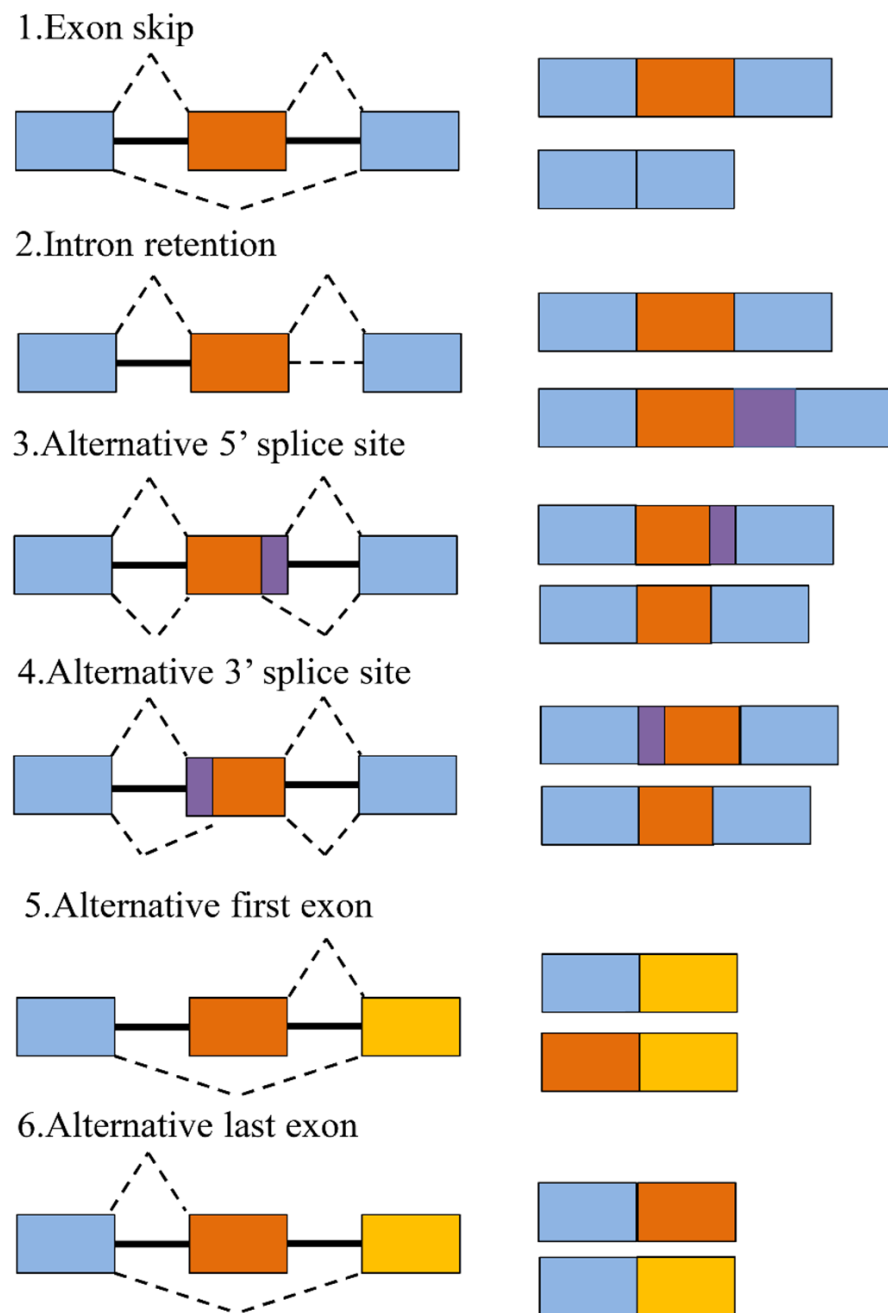


Figure S9. Pattern diagram for identifying AS events.



Peptide	Protein information
FTDASVQSDIK	PtHSP70.1
RFTDASVQSDIK	PtHSP70.1
VISGPGDKPMIGVTYK	PtHSP70.1
EIAEAYLGALK	PtHSP70.2
KIEDAIDQAIQWLDSNQLAEAEDEFDK	PtHSP70.2
NALENYAYNMR	PtHSP70.2

Figure S10. The spectrum information of SWATH-MS.

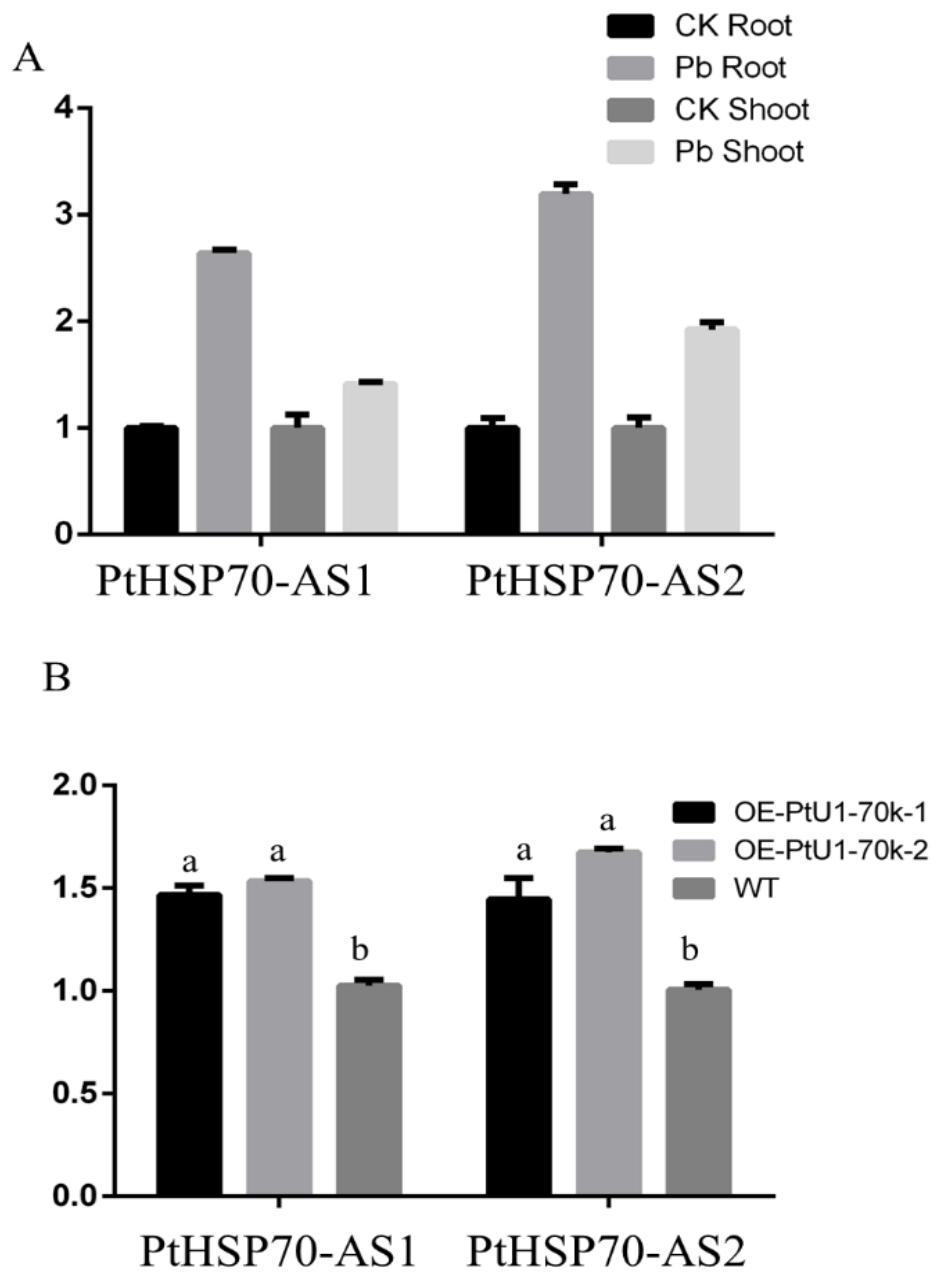


Figure S11. The expression of RT-qPCR in the reference of *PtACT6*.