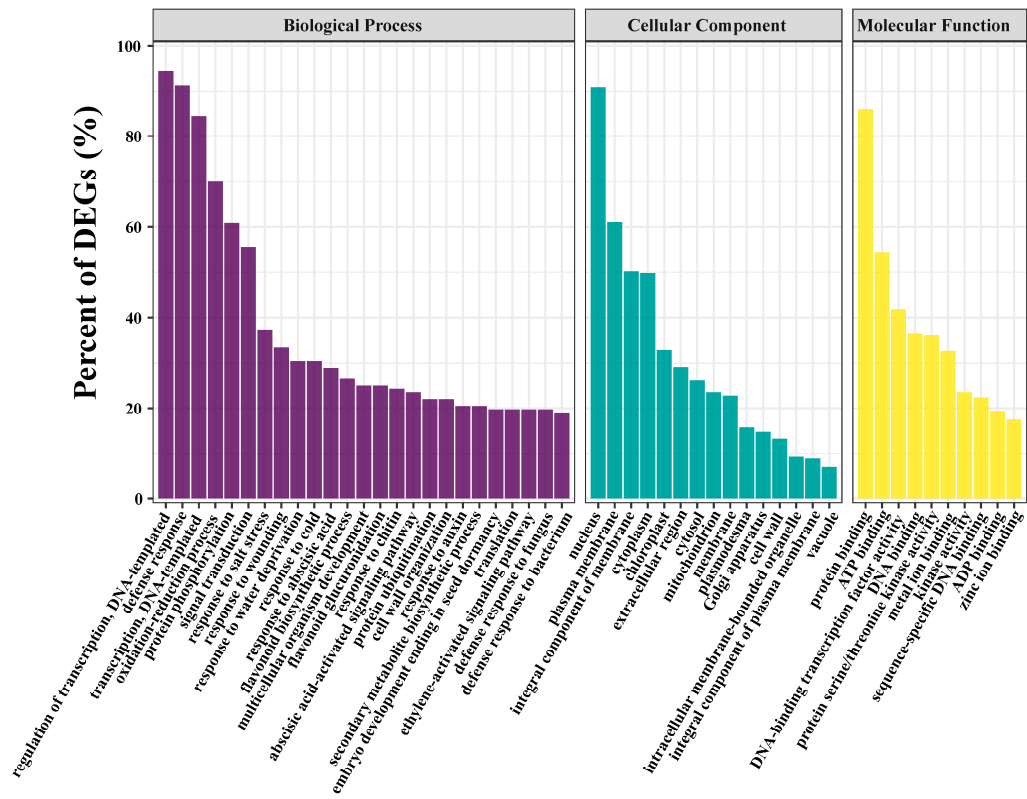


**Figure S1.** The phenotype differences in apricot vegetative hybrids with self-root Youyi. (A-C) The plant materials of vegetative hybrids Youyi + Ziye, self-rooted Youyi and hybrids Ziye + Youyi, respectively; (D) flowers of vegetative hybrids Youyi + Ziye below the graft union show gray-white color; (E) flowers of self-rooted Youyi show pink color; (F) flowers of vegetative hybrids Ziye + Youyi show white color; (G-I) petals and reproductive organ of plant materials, which corresponds with Figure A-C; the yellow arrows show the differences in size of reproductive organ, petal color and warping. (J-L) The red arrows show the differences in leaf vein, apex (the reverse side of leaf) and margin; this is followed by Figure G-H, respectively; (M) apricot pits of self-rooted *P. armeniaca* × *sibirica* ‘Youyi’ (left), and vegetative hybrids You + Ziye (right); (N) apricot kernels correspond with Figure M.

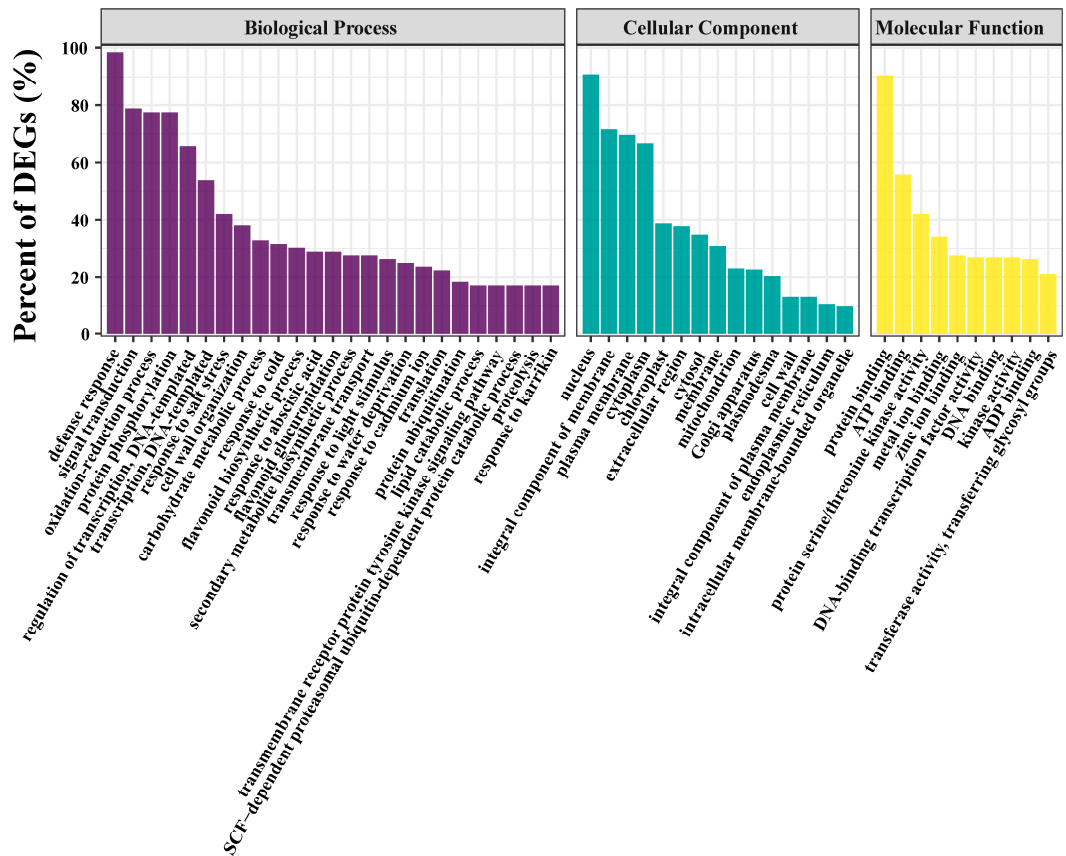
A

## PA\_vs\_SA



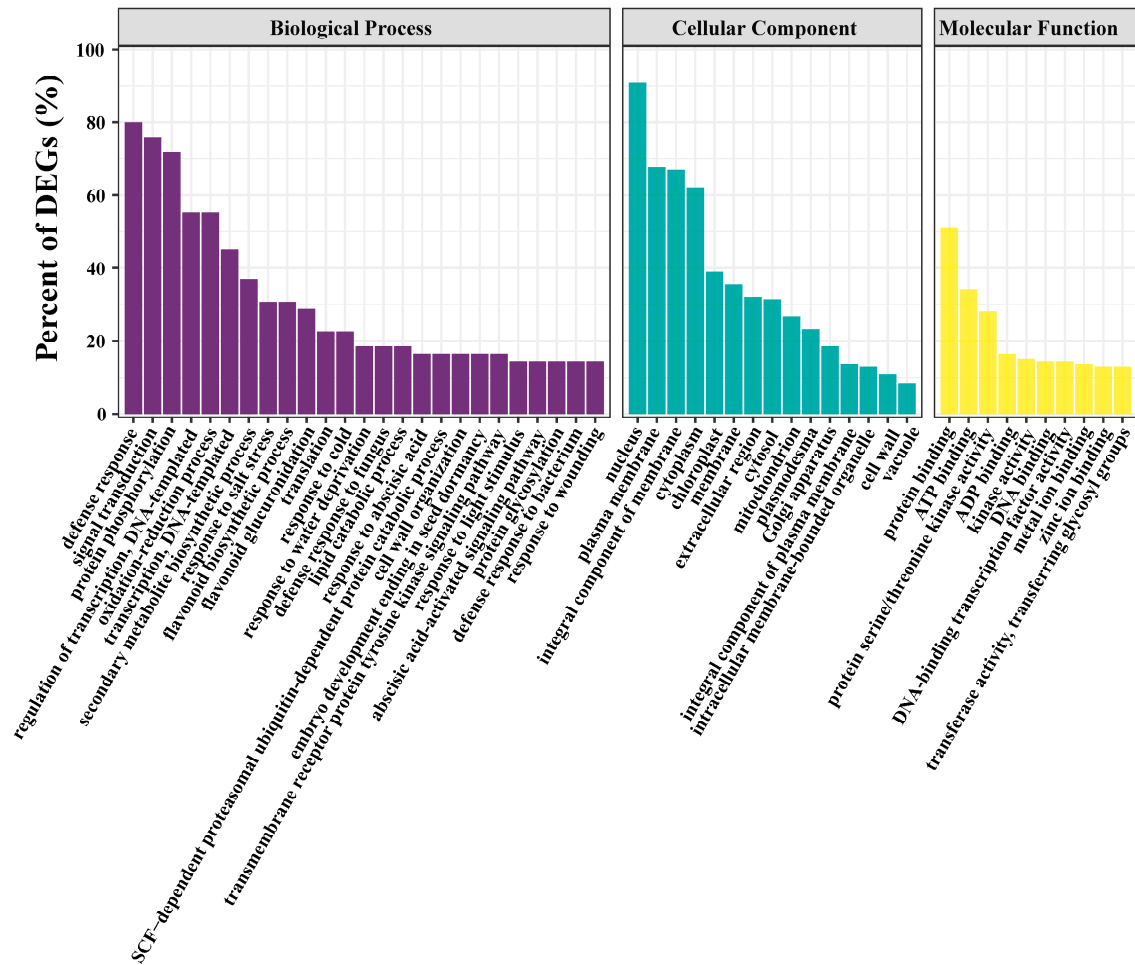
B

## AP\_vs\_SA



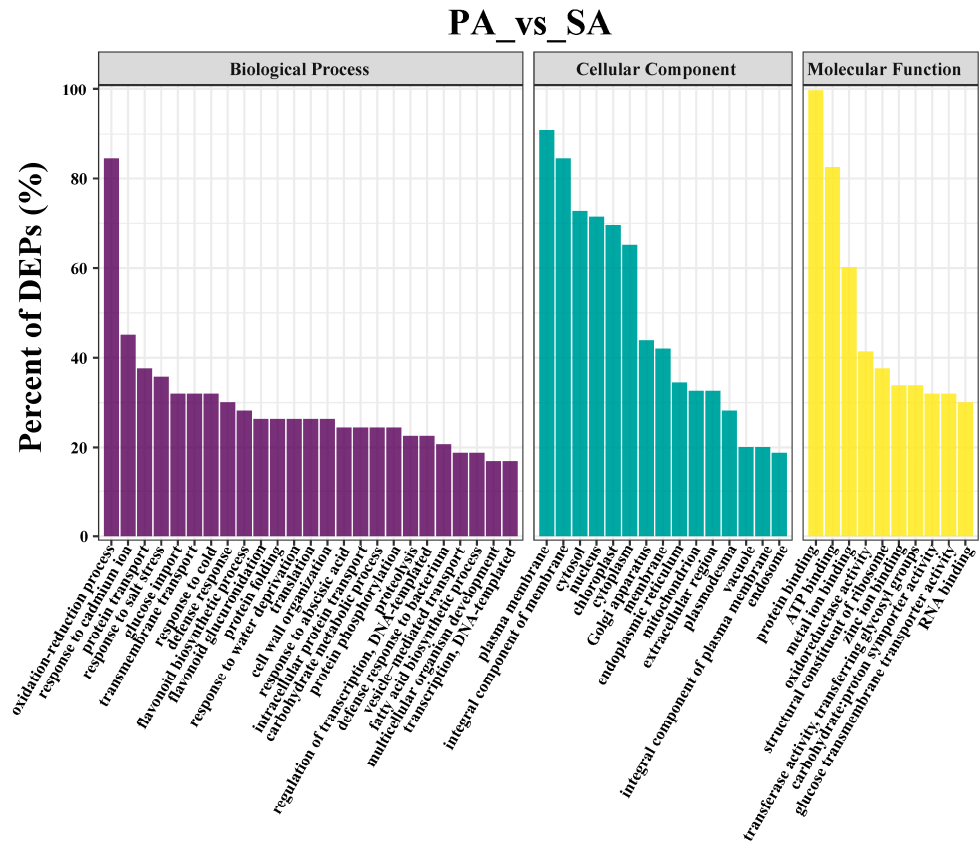
C

## Common DEGs

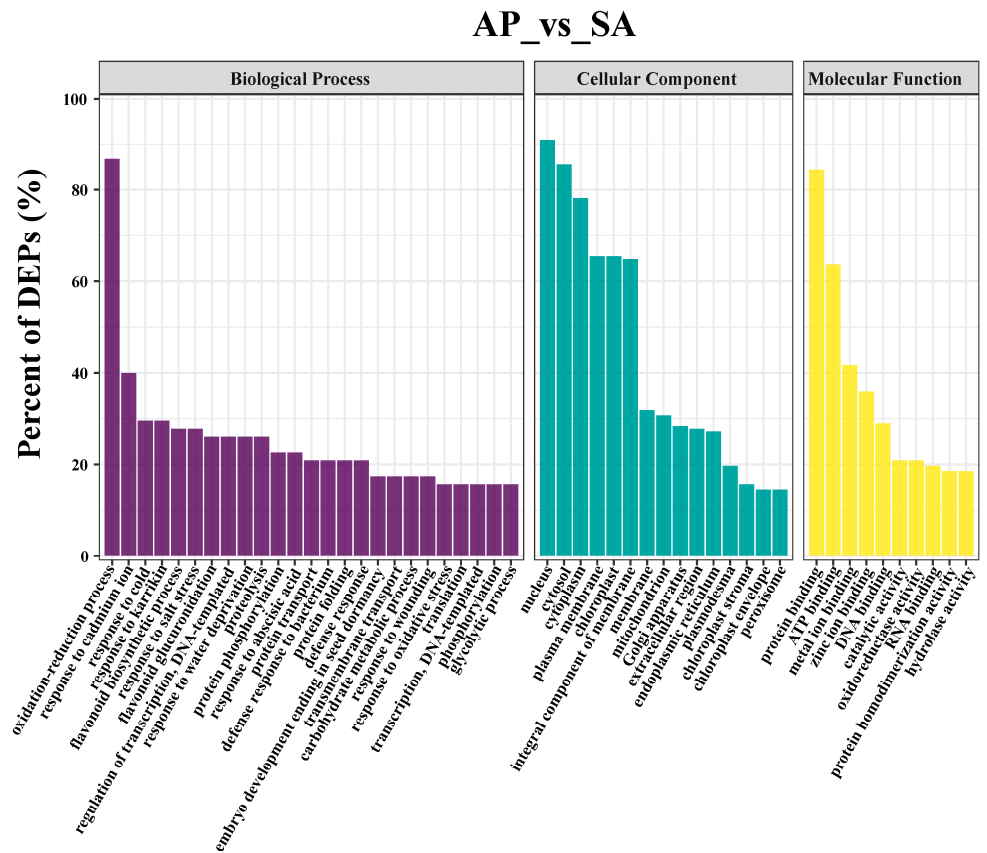


**Figure S2.** GO term analysis of differentially expressed genes (DEGs) in grafted apricot hybrids. (A) DEGs enriched in GO terms in peach/apricot (PA); (B) DEGs enriched in GO terms in apricot/peach (AP); (C) DEGs enriched in GO terms in peach/apricot (PA) and apricot/peach (AP).

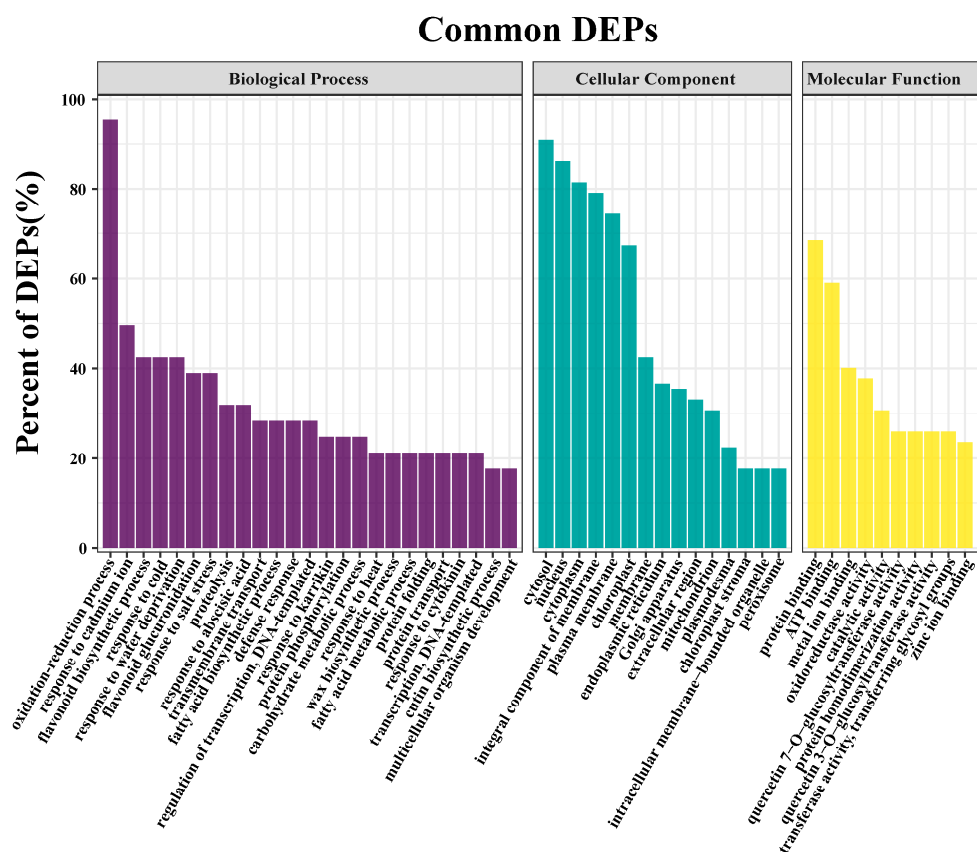
A



B



C



**Figure S3.** GO term analysis of differentially expressed proteins (DEPs) in grafted apricot hybrids. (A) DEPs enriched in GO terms in peach/apricot (PA); (B) DEPs enriched in GO terms in apricot/peach (AP); (C) DEPs enriched in GO terms in peach/apricot (PA) and apricot/peach (AP).