

Figure 1. Phylogenetic tree and gene structure of PheHsf genes. **(a)** Phylogenetic relationships among Hsf proteins in moso bamboo. The unrooted Neighbor-joining tree was constructed based on the amino acids of PheHsfs; the branches were reconfirmed by 1000 bootstrap replicates. **(b)** Exon-intron organization of corresponding genes. The exons: yellow boxes, the introns: black lines. **(c)** The motifs were identified by MEME. Different motifs are indicated by different colored numbers 1–20. **(d)** The detailed motif sequences by MEME.

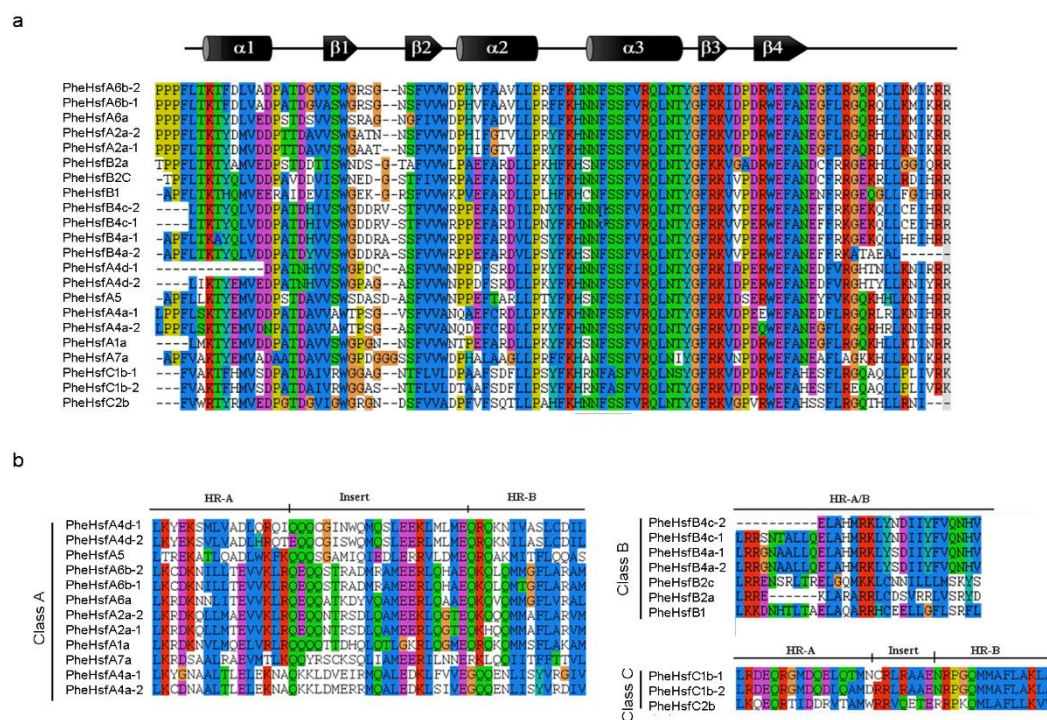


Figure 2. Multiple sequence alignment of the DBD domains and OD region of the PheHsf proteins. (a) The helix-turn-helix motifs of the DBD (α 1- β 1- β 2- α 2- α 3- β 3- β 4) are shown above the alignment. Cylindrical tubes: α -helices and, block arrows: β -sheets. (b) Multiple sequence alignment of the OD region of the PheHsf proteins. The three line segments at the top divide HR-A core, insert and HR-B regions in an orderly manner.

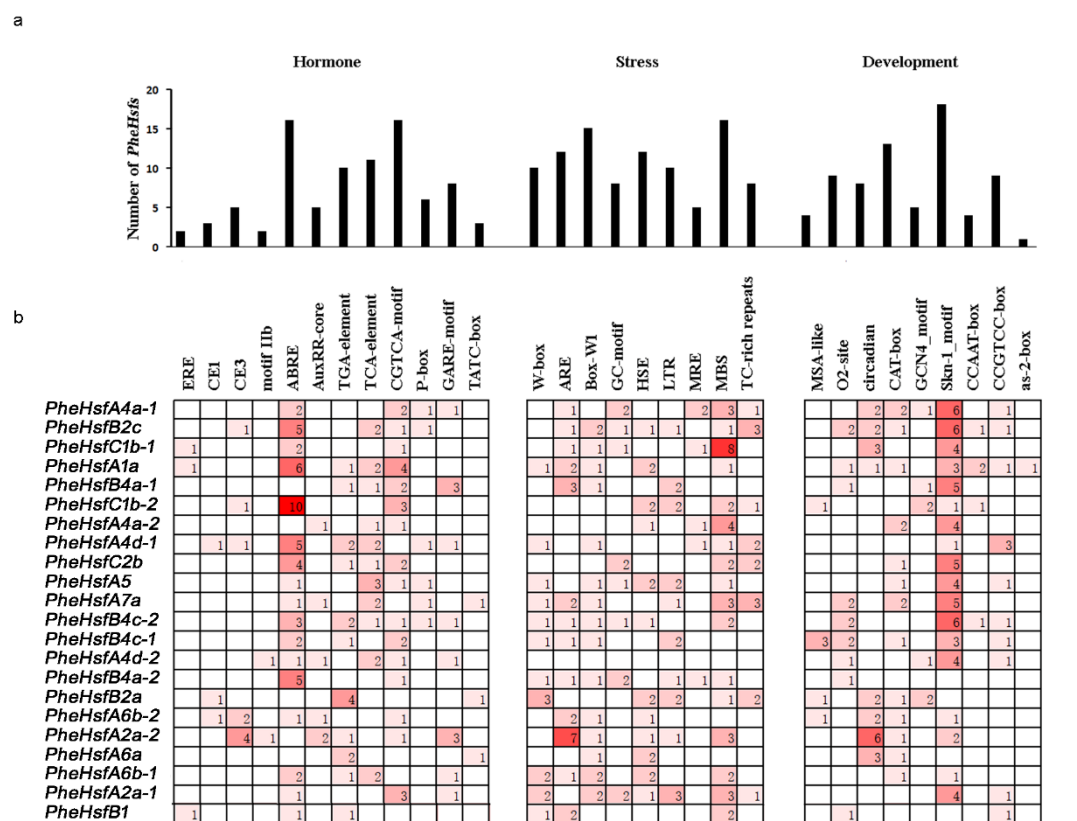


Figure 3. Various cis-acting elements in PheHsf gene-promoter regions. (a) The number of PheHsf genes contained cis-acting elements. (b) Number of each cis-acting elements in the promoter region of each PheHsf gene. The annotation of cis-acting elements: ERE, ethylene-responsive element; CE1, CE3, motif IIb, and ABRE, involved in the abscisic acid responsiveness; AuxRR-core and TGA-element, auxin-responsive element; TCA-element, involved in salicylic acid responsiveness; CGTCA-motif, involved in the MeJA-responsiveness; P-box, GARE-motif, and TATC-box, gibberellin-responsive element; W box, Binds WRKY type transcription factors and wounding and pathogen responsiveness; ARE, essential for the anaerobic induction; Box-W1, fungal elicitor responsive element; GC-motif, enhancer-like element involved in anoxic-specific inducibility; HSE, cis-acting element involved in heat stress responsiveness; LTR, involved in low-temperature responsiveness; MRE and MBS, MYB binding site involved in light responsiveness and drought-inducibility; TC-rich repeats, involved in defense and stress responsiveness; MSA-like, cis-acting element involved in cell cycle regulation; O2-site, cis-acting regulatory element involved in zein metabolism regulation; circadian, involved in circadian control; CAT-box, related to meristem expression; Skn-1 motif and GCN4_motif, cis-regulatory element involved in endosperm expression; CCAAT-box, MYBHv1 binding site; CCGTCC-box, related to meristem-specific activation.