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A genome-wide analysis of the *ASYMMETRIC LEAVES2/LATERAL ORGAN BOUNDARIES* (*AS2/LOB*) gene family in barley (*Hordeum vulgare* L.)

Key words: Barley, *AS2/LOB* gene family, Phylogenetic tree, Expression pattern

Research Summary

***ASYMMETRIC LEAVES2/LATERAL ORGAN BOUNDARIES* (*AS2/LOB*) genes are a family of plant specific transcription factors which play an important role in the regulation of plant lateral organ development and metabolism. In the present study, the gene structure, chromosome location, phylogenetic tree and expression profiles of *ASL/LBD* were performed. This genome-wide analysis of the barley *AS2/LOB* gene family contributes to our understanding of the functions of the *AS2/LOB* gene family.**

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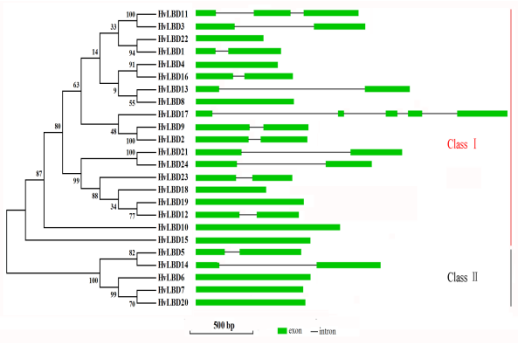
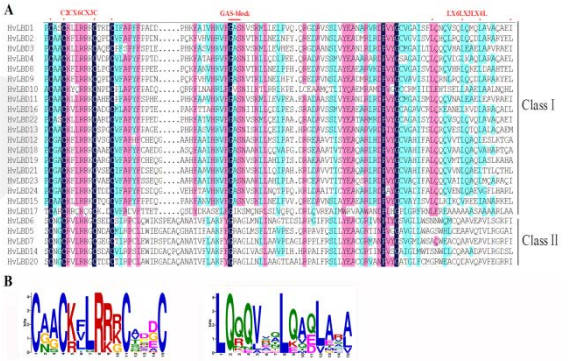
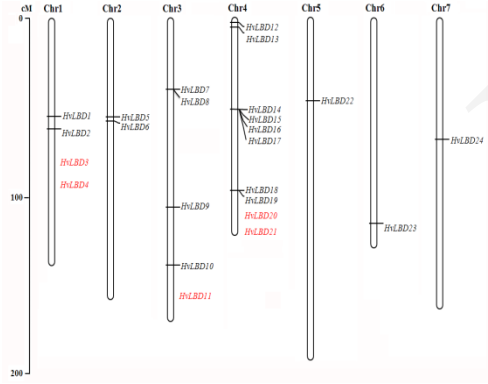
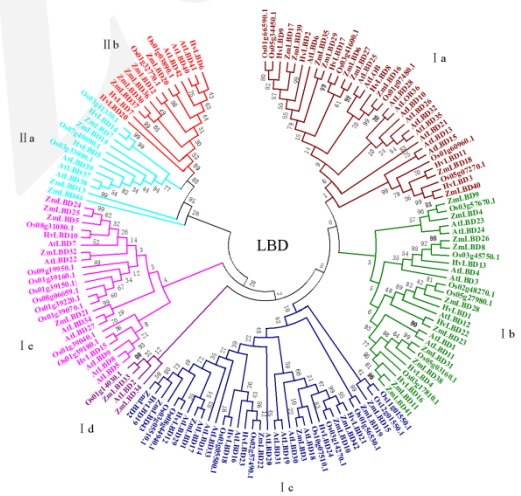
Innovation points

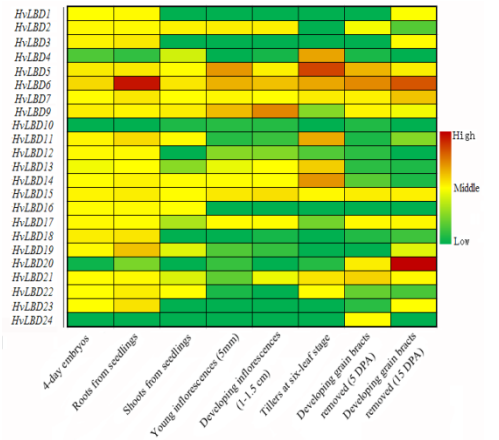


- Barley *HvASL/LBD* genomic structure
- chromosomal locations
- sequence homology
- expression patterns of barley *ASL/LBD* genes
- phylogenetic tree of *ASL/LBD* genes in barley, *Arabidopsis*, maize and rice









Innovation points

A series of comprehensive figures were generated to understanding the barley *AS2/LOB gene family*

Figure. 1. The phylogenetic tree and gene structure analysis of the HvASL/LBD proteins.

Figure. 2. The phylogenetic analysis of *ASL/LBD* genes in *Arabidopsis*, maize, rice and barley.

Figure. 3. The chromosomal location analysis of the *AS2/LOB* gene family in barley.

Figure. 4. Conserved domains of *HvAS2/LOB* gene family.

Figure. 5. The expression profile of *HvASL/LBD* genes in different tissues of barley except *HvASL5/LBD8*.

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