



Sex differential marker FD for rapid sex identification of *Litsea cubeba*

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ABSTRACT. *Litsea cubeba* is an important economic tree in China. Sex identification of the species is required to reduce breeding costs. Molecular biology is an ideal method to achieve this aim because of the lack of morphological differences between male and female plants, especially at the seedling stage. Sequence-related amplified polymorphism was used to amplify sex-related bands. Following sequencing, the amplified fragment D was used to create a sequence-characterized amplified region (SCAR) marker, FD. The SCAR marker is approximately 750 bp, is female-specific, and is expected to be useful for *L. cubeba* breeding programs. Furthermore, the amplified fragment L had homology to sex-determining-related genes of other species. Quantitative real-time polymerase chain reaction analysis of this fragment during flower bud development identified expression differences between male and female plants.

Key words: Sequence-related amplified polymorphism; Dioecious; *Litsea cubeba*; Sequence-characterized amplified region; Sex identification; Sex-determining-related genes