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Allelic variability in the third intron of the fibroin light chain gene in *Bombyx mori* (Lepidoptera: Bombycidae)

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ABSTRACT. Conformation-sensitive gel electrophoresis is a useful method for identifying allele polymorphism; it provides co-dominant molecular markers. Using this method, we identified genetic variability in the third intron of the fibroin light chain gene, *fib-L*, in six *Bombyx mori* strains. Only Chinese C21A strain did not demonstrate allelic alterations, showing only homoduplex DNA molecules. We found distinct heteroduplex profiles in the Japanese HAA, M12B and M19-2 and the Chinese C25B and C24-2 strains. Analysis with restriction endonuclease fingerprinting conformation-sensitive gel electrophoresis demonstrated the potential of this method for the identification of allelic variability in *B. mori*; this was confirmed by cloning and sequencing the different alleles. The main alteration was a 12-bp deletion in two alleles of the C24-2 strain and one allele of the HAA strain; this deletion results in specific heteroduplex DNA molecule profiles.

Key words: Conformation-sensitive gel electrophoresis; Allelic variability; *Bombyx mori*; Silkworm; Fibroin light chain

