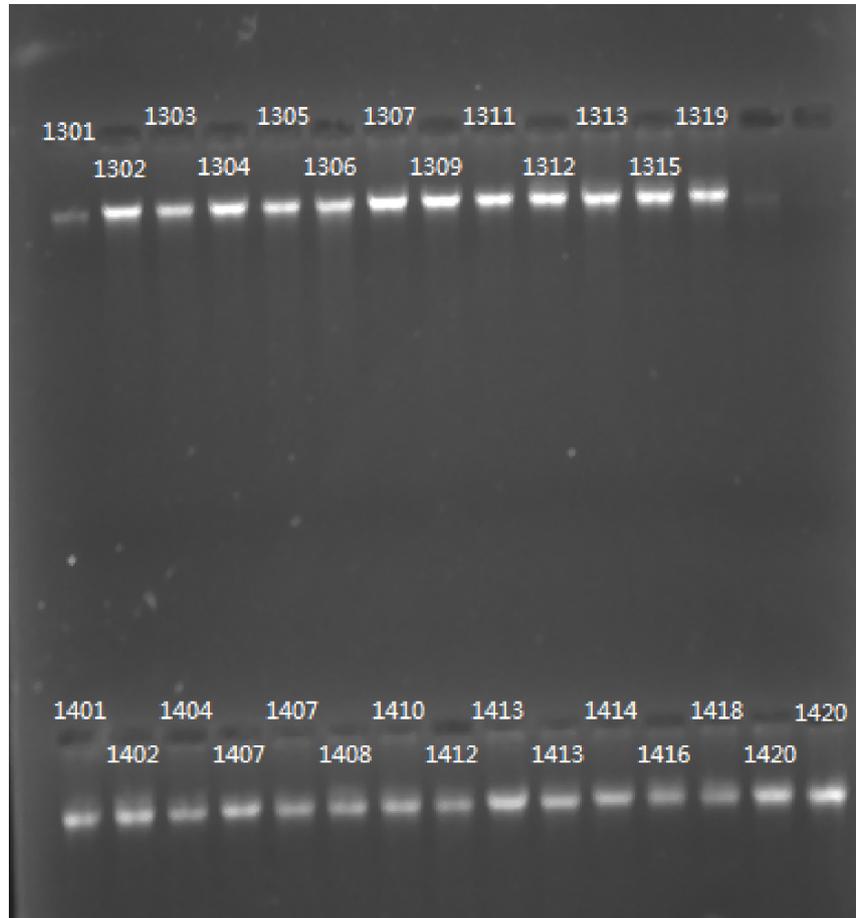


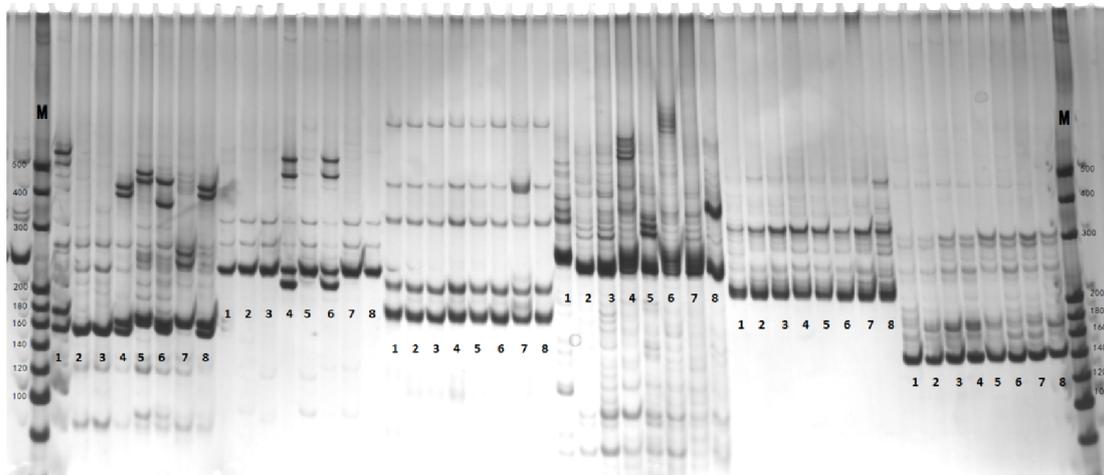
**Supporting Image 1. Genomic DNA extracted from F<sub>1</sub> hybrids using a DP305 plant DNA extraction kit (Tiangen, Beijing, PR China).**

Genomic DNA was resolved on 1% agarose gel and visualized by ethidium bromide staining.



**Supporting Image 2. Validation and characterization of SSR markers with 8 tea plant cultivars.**

PCR products were resolved on 10% polyacrylamide gel and visualized by silver staining. Lanes 1–8: Changyebaihao, Fudingdabaicha, Baihaozao, Longjin43, Wuniuzao, Huangyan, Tieguanyin and Mingshanbaihao; M: DNA ladder

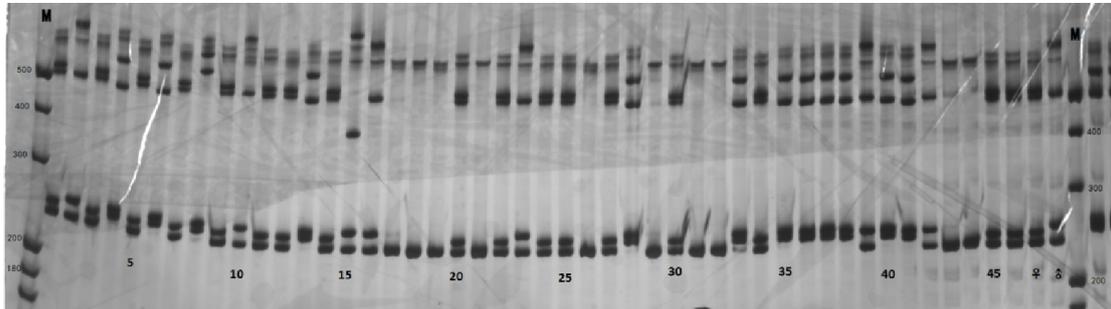


### Supporting Image 3. Genotyping in the mapping population

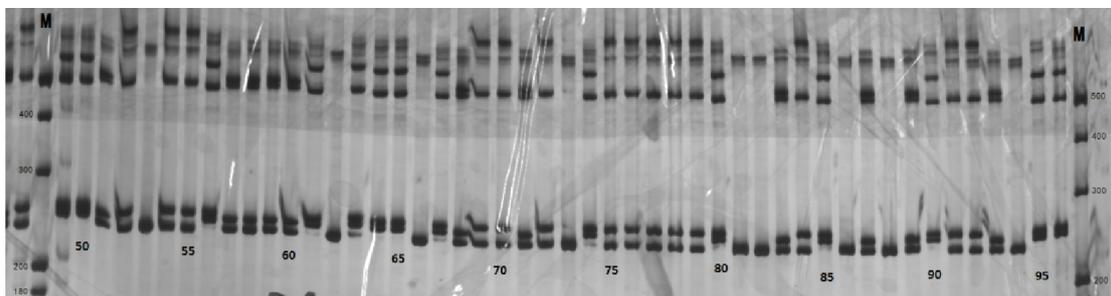
(Marker: CsFM1459; targeted size: 253bp; segregation type:  $ef \times eg$ )

PCR products were resolved on 10% polyacrylamide gels and visualized by silver staining. ♀ (lanes 47 and 143): Longjin43; ♂ (lanes 48 and 144): Baihaozao; lanes 1–46, 49–142 and 145–192: F<sub>1</sub> hybrids; M: DNA ladders.

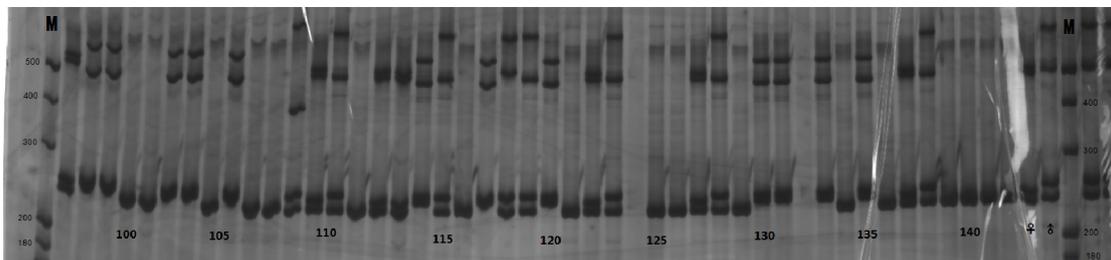
#### P1-1



#### P1-2



#### P2-1



#### P2-2

