Title: 3027- Actinidia arguta specific CAPS marker for sex determination

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Abstract body text: Kiwifruits (*Actinidia* spp.) are dioecious species. *Actinidia arguta* is a valuable kiwifruit germplasm because it produces hairless, nutritious, and sweet flavor fruits. Utilizing *A. arguta* as a breeding parent could increase the genetic diversity of kiwifruit. However, previously developed sex-linked markers have applicated only in few major kiwifruit species. Therefore, the present study developed the sex determination cleaved amplified polymorphic sequence (CAPS) marker in *A. arguta*. For marker development, 40,099 SNPs were extracted by re-aligning the genotyping-by-sequencing (GBS) reads to the Red5 reference genome sequences. The 21 sex-linked candidate SNPs on chromosome 25 were selected by comparing SNP locus between male and female accessions. Candidate CAPS markers distinguishing sex were designed based on the candidate SNPs. As a result of application of the candidate CAPS markers in 33 *A. arguta* germplasms (12 female and 21 male germplasms), only one CAPS marker was able to distinguish the female and male germplasms. Although the CAPS marker could be applied only in *A. arguta*, it will facilitate marker-assisted selection (MAS) in breeding program that utilize *A. arguta*. 

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